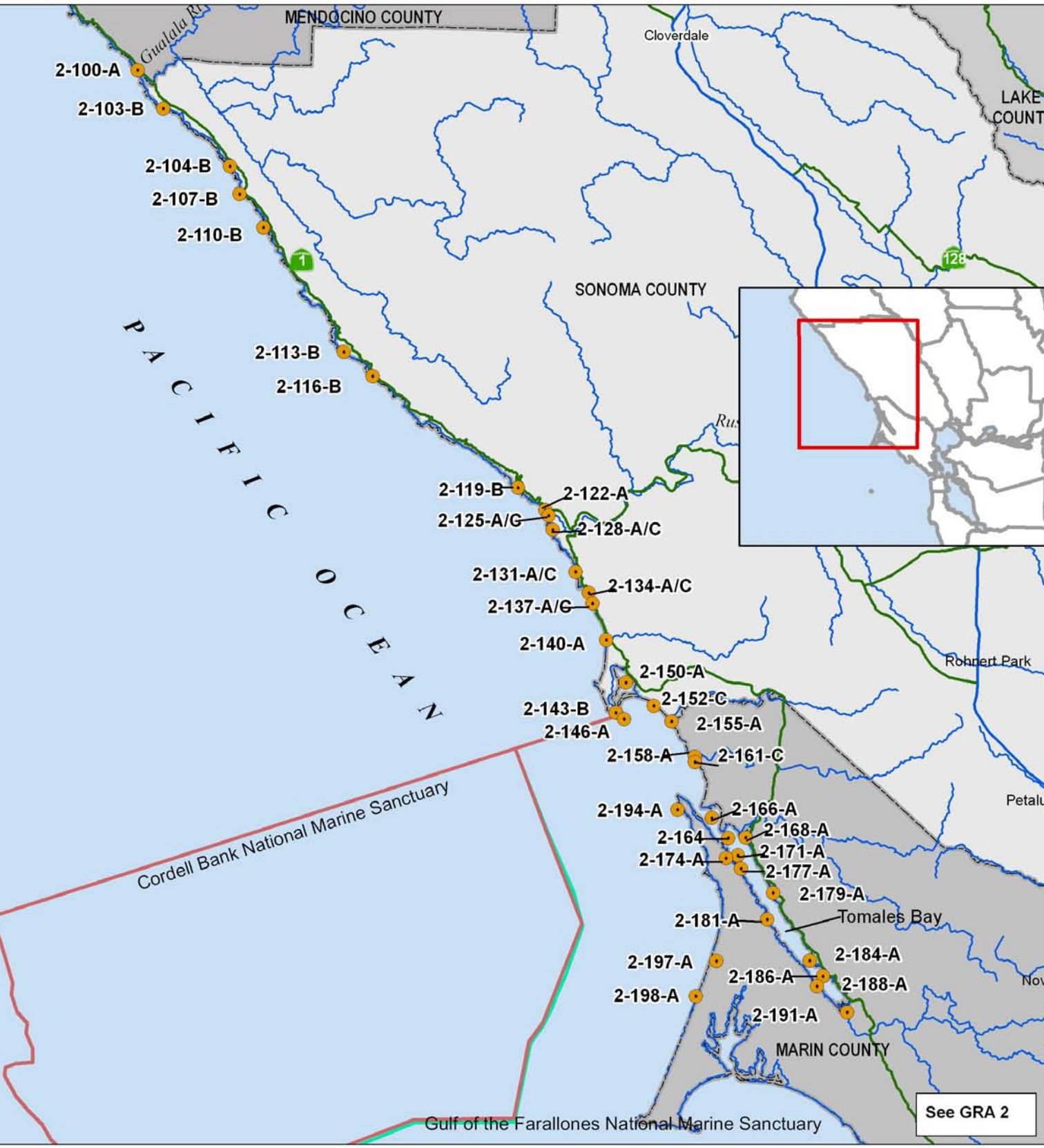
San Francisco Geographic Response Area 1
Sonoma and North Marin Coast
Environmental Sensitive Sites



ACP 2 - SF Bay & Delta - GRA 1 9841 - 1 October 1, 2005

Section 9841 – GRA 1 Sonoma and North Marin Coast

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Summary of Geographic Response Area 1 (GRA 1) Response Resources by Site and Sub-Strategy

Site	Site Name	sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	Anchoring type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	Special Equipment and kinds	(and notes)	deploy staff	Staff t tend
2-100	*Gualala River Inlet*																	
		.1 -	**Exclusion not necessary when a berm is blocking mouth.**															
				0	0	0	0	0		0		0	0			On-water Recovery / ART		
		.2 -	**Exclude oil when there is tidal exchange at lagoon mouth or when waves are overtopping berm. Protect riprap and fringi**															
				2000		50	os 3100	25	18-25/25-25#/danforth w chain	0	4					4 front-end loaders/dozers, sand bags, plastic rol	20	
		.3 -	**Exclusion when there are heavy river outflows**															
				0	0	0	0	0		0		0	0					
		.4 -	**Oil Recovery by skimming**															
				0	0	0	0	0		0	0	2	tsa/sps	0				
2-103	*Del Mar Landing Ecological Reserve*																	
		.1 -	**Alternatives to mechanical protection**															
				0	0	0	0	0		0		0	0			On-water Recovery / ART	0	
2-104	*Sea Ranch*																	
		.1 -	**Deflection: Channel oil to finer grain sand beaches where possible.**															
				1500	0	0	0	0		2		0	0				6	
		.2 -	**Shoreline cleaning and pre-cleaning**															
				0	0	0	0	0		0	0	0		0				
		.3 -	**Alternative technologies to mechanical protection: Skimming, off shore ART, nearshore ART**															
				0	0	0	0	0		0	0	0		0		On-water Recovery / ART		
2-107	*Black Point*																	
		.1 -	**Deflection, under clam conditions, away from seal haulout**															
				1500	0	0	0	12	25-40#	2	0	0		0			6	
		.2 -	**Alternatives to mechanical protection**															
																On-water Recovery / ART	0	
2-110	*Stewart's Point*																	
		.1 -	**divert oil away from rocky reefs and harbor seal haulout areas and towards less sensitive ares for collection.**															
				1500				12	12 x 25-40#	2							6	
		.2 -	**Alternative techniques**															
				0	0	0	0	0		0	0	0		0		On-water Recovery / ART		
2-113	*Gerstle Cove*																	
		.1 -	**Deflection under favorable conditions to sandy beach areas**															
				1500				12	12 x 25-40#	2							6	
		.2 -	**Alternatives to mechanical protection and cleanup**															
				0	0	0	0	0		0	0	0		0		On-water Recovery / ART		
		.3 -	**Shoreline Cleanup possibilities**															
				0	0	0	0	0		0	0	0		0				
2-116	*Stillwater Cove*																	
		.1 -	**Alternatives to mechanical means.**															
				0	0	0	0	0		0		0	0			On-water Recovery / ART		
		.2 -	**Exclusion by diking**															
				0	0	0	0	0		0	0	0		0				
		.3 -	**Shoreline Cleanup: remove oil from rocky intertidal areas.**															
				0	0	0	0	0		0		0	0			Pressure washers, pumps	12	
2-119	*Russian Gulch*																	
		.1 -	**Exclude oil from entering stream. Contain oil at lower part of stream.**															
				0			500					0				Small dozer or bobcat	12	
2-122	*Russian River Inlet - Mouth and Estu*																	
		.1 -	**Exclude oil from entering river.**															
				1200		50	os 100	12	9-12 / 25lb Danforth	0	3					dozer	12	
		.2 -	**Prevent spread of oil to river and beach area.**															
				1200		50	os 100	12	9-12 / 25lb Danforth								10	
		.3 -	**Oil Recovery by skimming**															
				0	0	0	0	0		0	0	2		0				
2-125	*Goat Rock Beach*																	
		.1 -	**Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**															
				0	0	0	0	0	0	0		0	0			On-water Recovery / ART	0	
2-128	*Blind Beach*																	

Site	Site Name
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT

.1 - Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-131 Wright's Beach

.1 - Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-134 Gleason Beach

.1 - Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-137 Portuguese Beach

.1 - Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-140 Salmon Creek

.1 - Exclude oil from entering the creek and oiling marshes.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0											Bulldozers or front-end loaders (2-3)	10	

.2 - Exclude oil from entering and moving upstream in the creek and from oiling marshes.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
2000				12	12 / 20 lb.	0	4				1 crane	30	

2-143 Bodega Head

.1 - Prevent oil from contaminating the intertidal zone of the headland.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	50	

2-146 Bodega Rock

.1 - Prevent oiling of largest island and largest rocks used for marine mammal haul outs.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-150 Bodega Harbor

.1 - Exclude oil from entering the harbor.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
5000				30	30 x 40lb northhill	2	0				Oil recovery from shore	10	

.2 - Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
1800				12	12 x 20lb	2	1		1		shoreside skimmer	14	

.3 - Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
2000				12	12 x 30lb.	2	0		0		Filter fabric or boom; sand bags or rock	8	

.4 - Prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
2000				12	12 x 20 lb. Danforth	2	1		1		harbor or swamp boom;	11	

.5 - prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
6000			6000	40	30-40 x 20lb mud anchors	3	2		2		inchannel mobile skimmers	20	

2-152 Pinnacle Rocks

.1 - Prevent oil from contacting the shoreline around the rocks. Avoid disturbing seabirds on the rocks.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-155 Estero Americano

.1 - Exclude oil from entering the estuary.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	10	

.2 - Exclude oil from entering the estuary. Prevent oil from entering seawater intake to aquaculture facility.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
1500		50 os	300	10	10 x 20lb.	0	6					20	

.3 - Minimize shoreline cleanup and restoration.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		300 ft ground cover fabric		

.4 - Oil Recovery by skimming

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0		0	0	2		0			

2-158 Estero de San Antonio

.1 - Exclude oil from entering the estuary.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	6	

.2 - Exclude oil from entering the estuary.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
1500		50 os	100			0	2					12	

.3 - Oil Recovery by skimming

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0		0	0	2		0			

2-161 Dillon Beach Rocks

.1 - Prevent oil from stranding and contaminating bird use areas on the rocky islands.

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
0	0	0	0	0	0	0		0	0		On-water Recovery / ART	0	

2-164 Tomales Bay

.1 - Primary exclusion for heavy oil impact threats: Exclude/divert/contain oil near mouth of bay to collection near Pelican Pt

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
15000	0		0	40	25/22# & 15/40#/danforth =20'	6	1	1	SPS		shallow draft vessels / stakes for shallows	20	2

.2 - Collect/Divert/Exclude - 2ndary backup strategyfor threats of heavy oiling to exclude oil from spreading to upper Bay and

Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	and kinds (and notes)	deploy staff	Staff t tend
7000			0	10	22#/danforths	3	0	1	SSS			9	2

sub-strategy	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	Anchoring type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	Special Equipment and kinds	(and notes)	deploy staff	Staff t tend
Site	**Site Name**														
PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT															
.3 -	**Deflect to alternative collection locale at White Gulch.**														
	3500	300		0	16	11/22# & 5/40#/Danforth + cha	2	0	1	SPS				6	
.4 -	**3rd alternate: Divert oil from Sand Point area across to Tomales Headland**														
	6000	0		0	0		5	0	0				local expertise	15	
.5 -	**Outside bay alternative: ART & Open Water Skimming.**														
	0	0		0	0		0	0	0						
2-166	***Sand Point to Toms Point***														
.1 -	**exclusion/deflection/collection: when severe oil impacts are threatening, exclude oil entry by deflection to shoreside bea**														
	1500		50 OS	100	8	22+#/danforth + 10 1" chain	1	1						5	
.2 -	**Diversion to shore / Collection at eastern Brazil Beach when severe oil impacts are threatening.**														
	2000		50 OS	100	10	22+#/danforth + 10' chain & st	1	1	1	SSS			Shallow draft boom boat	5	
.3 -	**Collection and Skimming for 2-166.1 and 2-166.2 boom deployments if significant quantities of oil can be accumulated.**														
	0	0	0	0	0		0	0	2	SSS	0				
2-168	***Walker Creek and Delta***														
.1 -	**Minimal Exclusion effort: Boom each channel mouth of the delta. This can be executed with minimal staff and small boat**														
	0	950		0	12	2 anchors and 10 stakes	0	1	0				shallow draft skiff	2	
.2 -	**protective booming of Walker Creek Delta marsh front as augment to channel exclusions (2-168.1)**														
	0	1500	0	0	10	Stakes	0	2	0		0			4	
.3 -	**2nd layer of exclusion: boom entire marsh front including the various channels. This strategy excludes oil from all chann**														
	0	2500		600	8	anchors and stakes	0	2	0				skiffs must be shallow draft	4	
.4 -	**3rd exclusion: When heavy oil threat is pending, deploy large boom set from Tom's Pt to north of Nick's Cove to exclude**														
	9000	0		0	20	22#/danforth + chain	3	1	0				shallow draft boomboats	11	
.5 -	**Upstream confinement for product spillage from Hwy 1 or upstream. Deploy boom across the lagoon near Hwy to contain**														
	0	400		0	0		0	1	0				stakes or small anchors	2	
2-171	***Hog Island***														
.1 -	**Hazing Pelicans and seabirds away from oil on beach**														
	0	0		0	0		0	1	0		3		mylar tape, mylar baloloons, stakes	2	
.2 -	**Protection booming to minimize shoreline cleanup.**														
	2500	0		0	8	15+#/danforth	2	1	0					8	
2-174	***White Gulch***														
.1 -	**Exclusion booming to prevent oil contamination to wetlands within White Gulch.**														
	0	2000	0	0	4	4x22lbdanforth	1	2	0		0			6	
2-177	***Pelican Point***														
.1 -	**Haze birds away from point**														
	0	0		0	0		1	0	0				mylar tape, mylar ballloons, stakes	2	
2-179	***Cypress Grove Preserve***														
.1 -	**Exclude oil from entering tidal channel to freshwater marsh.**														
	0	0	200	0	0	0	0		0	0				0	
.2 -	**Protect bayfront saltmarsh from oiling.**														
	0	0	600	0	0		0	0	0						
.3 -	**Protection booming of wooden bulkhead structure adjacent to white research building from oiling. Divert oil from riprap**														
	0	0	300	0	0		0	0	0						
2-181	***Sacramento Landing Marshes***														
.1 -	**Exclude/protect marshes by booming across cove/marsh front**														
	0	1000		0	9	15+# anchors and stakes	1	1	0					4	
2-184	***Tomasini Point***														
.1 -	**Exclude oil from marshes on SW and NE corners of Tomasini Pt**														
	0	400		0	3	1 anchor and 2 stakes	0	1	0					2	
2-186	***Millerton Point***														
.1 -	**Exclude oil from entering marshes**														
	0	800	200 sna	0	24	8/12+#/danforths & 16 stakes	0	3	0				very shallow draft skiffs & 16 stakes	6	
.2 -	**Exclusion Protection of shoreline from Millerton Pt to Tomasini Pt. Also excludes oil from large areas of oyster productio**														
	0	2500		0	6	6 danforths with chain and sta	1	1	0				stakes and shallow draft boats	5	
2-188	***Inverness***														
.1 -	**Protective booming of marshfront where endangered plant occurs.**														
	0	1500		0	8	anchors and stakes	0	1	0				very shallow water skiff	2	
2-191	***Lagunitas Creek & Delta Marsh***														
.1 -	**primary, exclude / protect marsh from subtantial marine oil threat**														
	4200	0		0	7	22# danforths with chain	3	1	0					9	

Site	Site Name																
sub-strategy	PREVENTION OBJECTIVE OR CONDITION FOR DEPLOYMENT																
	Harbor Boom	Swamp boom	Other boom/TYPE	Sorbant boom	Anchoring No	Anchoring type of gear	Boom boat	Skiff	Skimmer No	Skimmer Type	Special Equipment No	Special Equipment and kinds	(and notes)	deploy staff	Staff t tend
.2	-	2ndary exclusion / protection of marsh. This is secondary booming strategy to protect south bay from subtantial marine													
	4500	0		0	0		3	1	0					9	
.3	-	for upstream spill threats, divert to collection.													
	0	300		0	0		0	1	0					2	
2-194	Bird Rock														
.1	-	Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.													
	0	0	0	0	0	0	0		0	0		On-water Recovery / ART		0	
2-197	Abbott's Lagoon														
.1	-	Exclusion at inlet													
	0	0	0	0	0	0	0		0	0		On-water Recovery / ART			
.2	-	Block lagoon entrance with sediment dike (medium grained sand). Prevent oil from entering lagoon.													
	0	500		600	10	6-10 / 25lb danforth	0	1	0			dozer & front end loader		7	
.3	-	Exclude oil from entering lagoon.													
	0	500		600	10	6-10 / 25lb. Danforth	0	1	0			Build sediment dike		8	
2-198	Point Reyes Beach														
.1	-	Prevent oiling of snowy plover and elephant seal use areas. Prevent injury to sand dunes from cleanup activities.													
	0	0	0	0	0	0	0		0	0		On-water Recovery / ART			

2-100 -A Site Summary- Gualala River Inlet 2-100 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 46	123 32
USGS Quad:	**7.5" Quad: Gualala, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

The beach extends from the Gualala River mouth south to the first rocky headland. A sandspit closes the mouth of this river when freshwater flow stops during the summer and early fall. The sand spit is a relatively steep coarse-grained sand beach, backed by small vegetated sand dunes. Beach extends from the Gualala River south to the first rocky headland. A lagoon develops behind the sand spit with extensive freshwater wetlands on the south shore. The north bank of the river is a steep rocky bluff with fringing marsh and rip-rap of broken concrete below the town.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshes at river mouth/lagoon are priority "A" all year. Beach is priority "A" during smelt spawning season (February through July); during the remainder of the year, beach is priority "B" due to harbor seal haulout activity.

RESOURCES OF PRIMARY CONCERN

Marsh habitat for migratory shorebirds, fish, and waterfowl heaviest during fall and winter.
Freshwater marsh at risk all year.
Harbor seal haulout on outer sand beach near end of sand spit all year.

Shorebirds and waterfowl migrate and use area mainly in fall and winter months, but is inhabited all year. Passerine songbirds use the riparian and brush habitat along the river banks all year.

Harbor seals use outer sand beach area for haulout. River otters in the river.

Smelt use the intertidal zones of the beaches near the river mouth for spawning February through July. Migratory fish species (salmon and steelhead) move through the river in the fall and winter to spawn. Young fingerlings and smolts may be in the lagoon all year.

Riparian willow and sedge habitat along the river banks. Vegetated dunes on south side of the river.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Mike Henderson	Anchor Bay Campground, Owner	
	Pete Kalvass	CA Dept. of Fish & Game	(707) 944-5500

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 46	123 32

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Contamination and injury to marsh and riparian habitat, waterfowl, shorebirds, harbor seals and fish. Dune vegetation may also be at risk from cleanup activities and traffic. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

High waves, wind, swift river currents.

SITE STRATEGIES

Strategy 2-100.1 **Objective: Exclusion not necessary when a berm is blocking mouth.** ACP DATE 1/1/1996

If sand berm is blocking lagoon entrance, no action needed unless it appears that surf will over-top the berm. If so, employ method "2."

Strategy 2-100.2 **Objective: Exclude oil when there is tidal exchange at lagoon mouth or when waves are overtopping berm. Protect riprap and fringing marsh on town side of river.** ACP DATE 7/1/2005

If surf is over-topping beach berm into lagoon, use bulldozers and front-end loaders to build up barrier berm by skimming sand from neighboring flat beach (not dunes). Use plastic and sand bags as necessary to create a temporary non-erodible barrier. Deploy boom as follows: line northern shoreline with sorbent boom. Use deflection boom to either divert oil away from northeastern shore -a) to backside of spit or, b) to possible skimmer(s) stationed between island and southwest shore. All containment boom backed by sorbent boom. To collect oil in case of accumulation, use 50ft of oil snare, 100 ft of sorbent boom. Contact IC if oil accumulates and skimmers become necessary.

Strategy 2-100.3 **Objective: Exclusion when there are heavy river outflows** ACP DATE 7/1/2005

If heavy outflow due to run-off prevents entry of oil from the sea to the lagoon, no immediate action may be necessary. Maintain watch on lagoon outflow and implement booms when flow begins to diminish enough that outflow no longer repels surf-borne oil and erect barrier as necessary and feasible (see strategy 2).

Strategy 2-100.4 **Objective: Oil Recovery by skimming** ACP DATE 7/1/2005

If skimmer is deemed necessary by IC, station between island and southwest shore

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-100.1	0	0	0	0		0	0		0	0		On-water Recovery / ART		
2-100.2	2000		50 os	3100	25	18-25/25-25#/danforth w chain & lin	0	4				4 front-end loaders/dozers, sand bags, pl	20	
2-100.3	0	0	0	0		0	0		0	0				
2-100.4	0	0	0	0	0		0	0	2	tsa/sps	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 101 to Santa Rosa, west on Hwy 12 to Hwy 116; proceed on 116 west to Hwy1 at Jenner; proceed north on Hwy 1 to Gualala. Access is from south Gualala Point County Park - south side of river is primary access. Can also access from Tree Farm Rd at north end of Hwy 1 bridge crossing Gualala River. The beach extends from the Gualala River mouth south to the first rocky headland.

LAND ACCESS: Gualala Pt access south side of river, also at Tree Farm Rd on north

WATER LOGISTICS:
Limitations: depth, obstruction — Large surf oceanside, shallow water in river

Launching, Loading, Docking and Services Available: Small skiffs hand launch in river

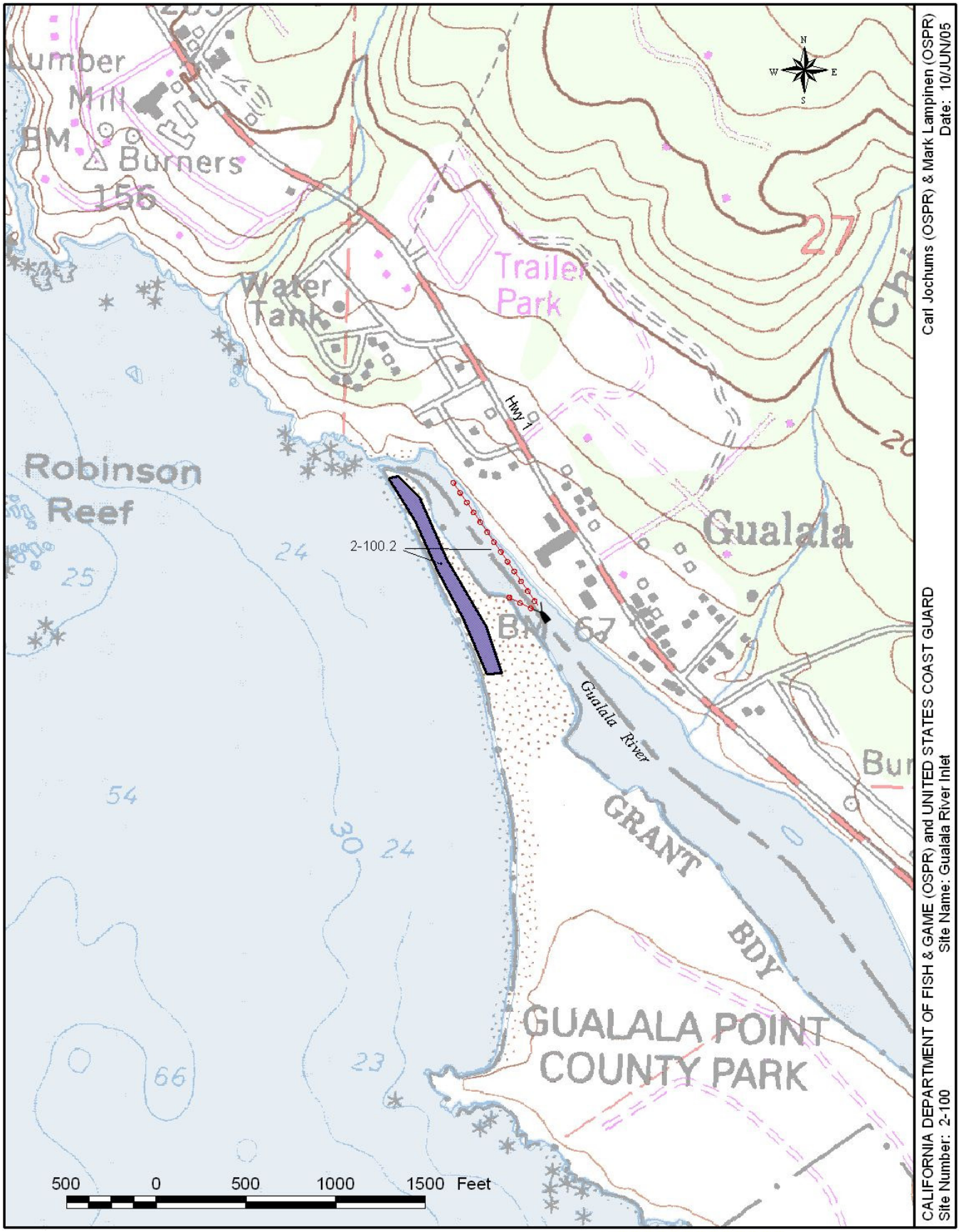
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Gualala Point County Park. Decon could be done at beach parking lot.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communications via two-way radio and landline only


Lumber Mill
BM
Burners
156
Water Tank
Trailer Park
27
Hwy 1
Robinson Reef
2-100.2
24
25
Gualala
BM
67
Gualala River
54
30
24
GRANT
BDY
GUALALA POINT COUNTY PARK
66
23
500 0 500 1000 1500 Feet
N
W
E
S
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Gualala River Inlet
Site Number: 2-100
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-103 -B Site Summary- Del Mar Landing Ecological Reserve 2-103 -B

County:	Thomas Guide Location	Latitude N	Longitude W
Sonoma	Sonoma County	3 8 45	123 31
USGS Quad: **7.5" Quad: STEWARTS POINT, CA**	**NOAA Chart:** **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

At Del Mar Point a mile south of the Gualala River. Located at the northern end of the Sea Ranch Community. Shoreline of exposed rocky cliffs fronted by rocky intertidal wave cut platforms, boulders and offshore rocks. This is a California Dept. of Fish and Game Ecological Reserve.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year. Extensive rocky intertidal habitat and harbor seal haul outs present all year. Seals pup from March through May.

RESOURCES OF PRIMARY CONCERN

Extensive rocky intertidal habitat, including tidepools, mussel beds and algal beds.

Intertidal areas used by a variety of shorebirds throughout the year but especially during spring and fall migrations.

Harbor seals use the outer rocky reefs to haul out throughout the year and occasionally have their pups in the spring.

Kelp forests are present offshore during the summer and into late fall.

The intertidal rocky platforms support extensive mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Fred H. Tarp	Sea Ranch Association	

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 45	123 31

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Avoid contamination, trampling and further injury to rocky intertidal plants and animals, shorebirds, and harbor seals. Tidepools may trap and retain oil.

HAZARDS and RESTRICTIONS:

Beware of the dangerous surf conditions. Also slippery rocky shoreline and steep bluffs pose slip and fall hazards. Private property.

SITE STRATEGIES

Strategy 2-103.1 Objective: Alternatives to mechanical protection

ACP DATE 1/1/1996

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersants and In-situ burning).
b) Inspect beach for possbile pre-cleaning.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-103.1	0	0	0	0		0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 north of Jenner and Fort Ross towards Gualala. This site is adjacent to Sea Ranch property at northern end. Access is at the end of Helm Rd (a private Sea Ranch road - get a pass from Sea Ranch Security). Emergency access to the site from the bluffs which parallel the beach. At Del Mar Point a mile south of the Gualala River. Located at the northern end of the Sea Ranch Community.

LAND ACCESS: Vehicle access limited. Mostly foot access from parking area on bluff.

WATER LOGISTICS: Potentially large surf and offshore rocky reefs
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: None available locally

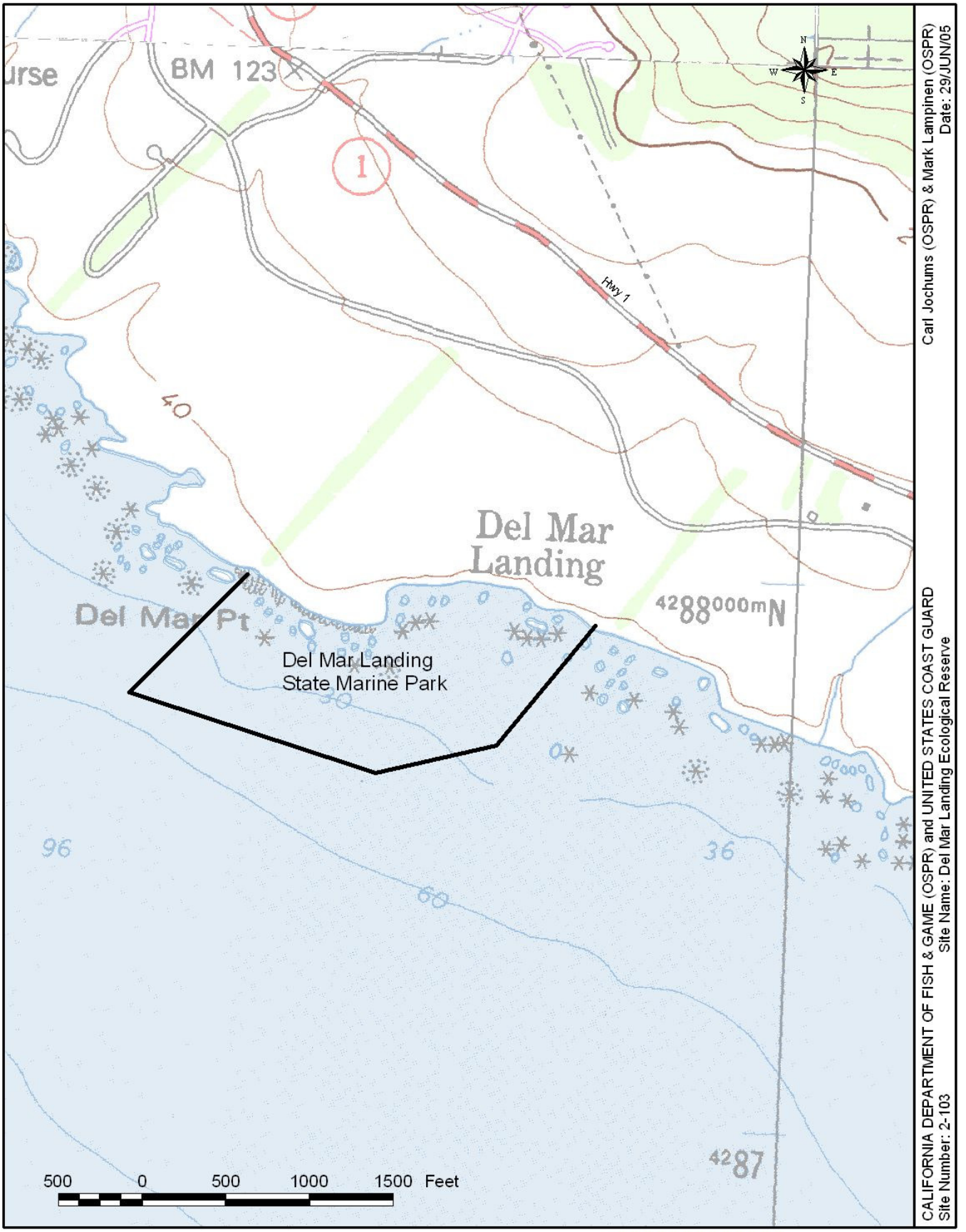
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Nearest town is Gualala a few miles away. No boat or harbor services nearby. Staging for shoreline cleanup in possible parking areas and roads on bluffs above site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communication via two-way radio and landline only.



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 43	123 28
USGS Quad:	**7.5" Quad: STEWARTS POINT, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes the rocky intertidal wave cut platforms and sandy beaches within the Sea Ranch community boundary, approximately from Gualala Point on the north end to Black Point on the south end. About 10 miles of rocky intertidal wave cut platforms and offshore wash rocks. Many medium to fine grained sand beaches are interspersed between rocky reefs. This reach of ocean front includes 3 marine reserves, including: Del Mar Landing, Walk-on Beach, and the offshore rocks north of Smuggler's Cove.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year. Harbor seals give birth on select rocks on the outer reef during March through May. Shorebirds are present all year but especially abundant during spring and fall migration.
Intertidal plants and animals, mussel beds and tidepools are present all year.

RESOURCES OF PRIMARY CONCERN

Extensive rocky intertidal habitat, including tidepools, mussel beds and algal beds.

Intertidal areas used by a variety of shorebirds throughout the year but especially during spring and fall migrations.

Harbor seals use the rocky reefs to haul out throughout the year and have their pups in the spring. Major haulout/pupping areas are at Shell Beach and at the point off Green Cove Drive off Headlands Reach (MP 53.22).

Kelp forests are present offshore during the summer and into late fall.

The intertidal rocky platforms support extensive mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Fred H. Tarp	Sea Ranch Association	

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 43	123 28

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Contamination and injury to harbor seals, rocky intertidal plants and animals, and shorebirds. Oil may be trapped and contained in tidepools and boulder areas during periods of low wave energy. Saturation of coarse grain sand beaches is possible.

HAZARDS and RESTRICTIONS:

High wave energy and dangerous surf, slippery rocks, high bluffs.

SITE STRATEGIES

Strategy 2-104.1 Objective: Deflection: Channel oil to finer grain sand beaches where possible.

ACP DATE 1/1/1996

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy. When water conditions do permit, deploy deflection boom offshore to protect rocky reefs and coarse grain pocket beaches; direct oil toward fine grain sand beaches for collection.

Strategy 2-104.2 Objective: Shoreline cleaning and pre-cleaning

ACP DATE 7/1/2005

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. Since on-water containment and recovery efforts are not totally effective, shoreline cleanup may be necessary.

a) Inspect shoreline for possible pre-cleaning.

b) Use sorbents and flushing of pooled oil to nearshore collection.

Strategy 2-104.3 Objective: Alternative technologies to mechanical protection: Skimming, off shore ART, nearshore ART

ACP DATE

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy. Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) or even nearshore dispersal.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-104.1	1500	0	0	0		0	2		0	0		6	
2-104.2	0	0	0	0	0		0	0	0	0			
2-104.3	0	0	0	0	0		0	0	0	0	On-water Recovery / ART		

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, Sea Ranch is a long section of coast (ca. 10 miles) between Fort Ross and Gualala. Site includes the rocky intertidal wave cut platforms and sandy beaches within the Sea Ranch community boundary, approximately from Gualala Point on the north end to Black Point on the south end.

LAND ACCESS: Vehicle access limited. Primarily foot access. Private property.

WATER LOGISTICS:

Limitations: depth, obstruction: Dangerous surf; submerged rocks

Launching, Loading, Docking and Services Available: None available locally. Hand launch skiffs across beach.

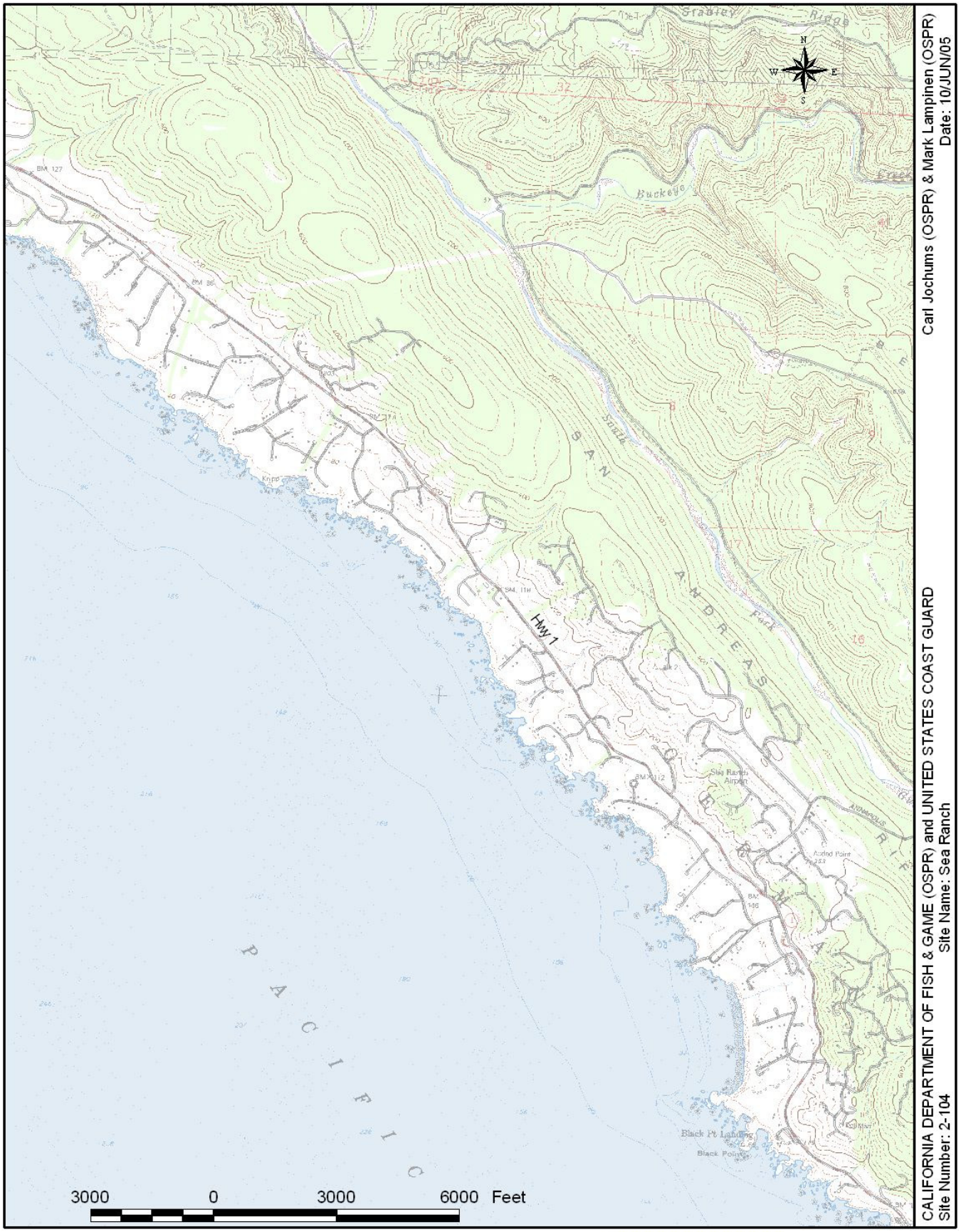
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Satellite staging areas at parking areas at Helm St. (Del Mar Beach) and Shell Beach.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communications via two-way radio and landline only.



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Black Point

2-107 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 41	123 26
USGS Quad:	**7.5" Quad: Stewart's Pt, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Within Sea Ranch property at south end. At Black Point Landing. Exposed rocky cliffs at headland with many small rock islands nearshore. A long crescent shaped beach spans northerly for about one mile to another rocky headland. Between headlands, the beach is a deeply recessed pocket cove surrounded by steep cliffs.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year. Harbor seals present all year.
Shorebirds are present all year but especially abundant during spring and fall migration.
Intertidal plants and animals, mussel beds and tidepools are present all year.

RESOURCES OF PRIMARY CONCERN

Extensive rocky intertidal habitat, including tidepools, mussel beds and algal beds.

Intertidal areas used by a variety of shorebirds throughout the year but especially during spring and fall migrations.

Harbor seals use the rocky reefs to haul out throughout the year.

Kelp forests are present offshore during the summer and into late fall.

The intertidal rocky platforms support extensive mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Fred H. Tarp	Sea Ranch Association	

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 41	123 26

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Contamination and injury to harbor seals, rocky intertidal plants and animals and shorebirds. Pooling of oil under rocks and in tidepools is possible, especially during periods of low wave energy. Oil may penetrate coarse grain beaches.

HAZARDS and RESTRICTIONS:

Extreme sea and surf conditions possible, rocky intertidal areas slippery and uneven, eroding bluffs may be unstable.

SITE STRATEGIES

Strategy 2-107.1 Objective: Deflection, under clam conditions, away from seal haulout

ACP DATE

As water conditions permit, divert oil away from haulout areas and deep cove south of Black Point. Direct oil toward fine grain sand beaches for collection. Deploy deflection boom, use manual sorbents, flush pooled oil where appropriate and possible.

Strategy 2-107.2 Objective: Alternatives to mechanical protection

ACP DATE 1/1/1996

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
c) Inspect shoreline for possible pre-cleaning

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-107.1	1500	0	0	0	12	25-40#	2	0	0	0		6	
2-107.2											On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, this site is at the southern end of the Sea Ranch community. A road proceeds out towards the point. Within Sea Ranch property at south end. At Black Point Landing.

LAND ACCESS: Vehicle access limited. Foot access mostly.

WATER LOGISTICS: Limitations: depth, obstruction — Potentially dangerous surf, submerged rocky reefs.

Launching, Loading, Docking and Services Available: None available locally. May hand launch skiffs across beach.

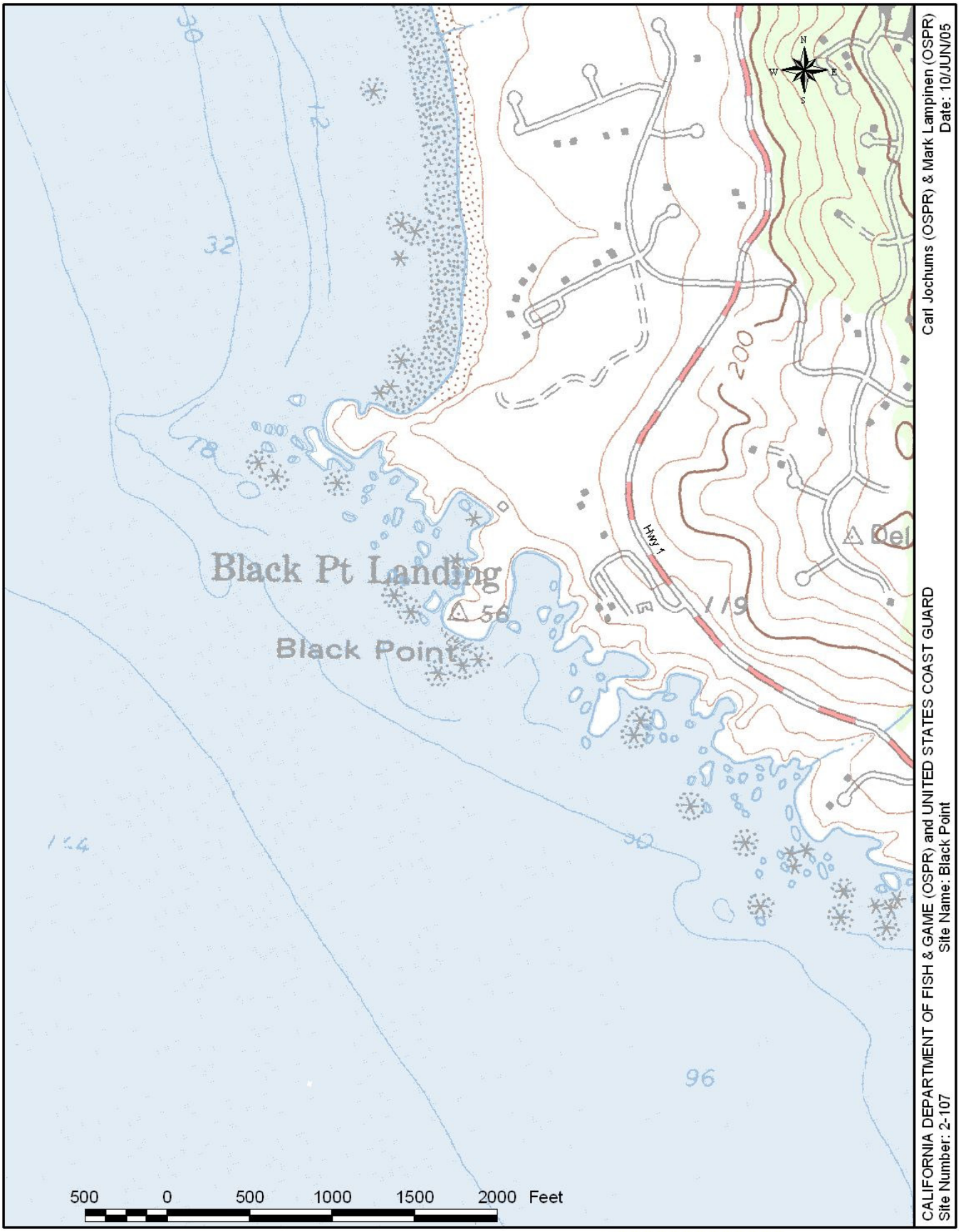
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at parking areas on bluffs above site. Sonoma County Parks and Sea Ranch have keys to locked gates on roads out to shore.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communication via two-way radio and landline only.


Black Pt Landing
Black Point
Hwy 1
500 0 500 1000 1500 2000 Feet
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Number: 2-107
Site Name: Black Point
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05

Site Summary- Stewart's Point

2-110 -B

Thomas Guide Location	Latitude N	Longitude W
	3 8 39	123 24

County: Sonoma

USGS Quad: 7.5" Quad: Stewarts Pt, CA

NOAA Chart: 18640

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes the wave-cut rocky platforms around the headland at Stewart's Point and the large offshore rock, Stewart's Point Island. Exposed rocky cliffs with wave cut platforms at headland. One large island (Stewarts Point Island) with additional wash rocks and a gravel tombolo off the point and a few small islands north of point. Fine to medium grain pocket beaches followed by 10 feet of cobble which are backed by cliffs between headlands.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year. Harbor seals present throughout the year.
Shorebirds are present all year but especially abundant during spring and fall migration.
Intertidal plants and animals, mussel beds and tidepools are present all year.

RESOURCES OF PRIMARY CONCERN

Extensive rocky intertidal habitat, including tidepools, mussel beds and algal beds. Harbor seal haulout area.

Intertidal areas used by a variety of shorebirds throughout the year but especially during spring and fall migrations.

Harbor seals use offshore rocks and reefs to haul out throughout the year (ca. 300) and occasionally have their pups in the spring.

Kelp forests are present offshore during the summer and into late fall.

The intertidal rocky platforms support extensive mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Arthur Richardson	Owner Ranch and Stewarts Pt Stores	(707) 785-2406

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma	18640	3 8 39	123 24

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Contamination and injury to harbor seals, rocky intertidal plants and animals, and shorebirds. Pooling of oil under rocks and in tidepools is possible during low energy periods. Saturation of coarse grain sand beaches.

HAZARDS and RESTRICTIONS:

High wave energy, eroding bluffs, slippery and uneven rocky intertidal areas.

SITE STRATEGIES

Strategy 2-110.1 Objective: divert oil away from rocky reefs and harbor seal haulout areas and towards less sensitive ares for collection.

ACP DATE 1/1/1996

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site. When water conditions do permit, divert oil away from haulout areas to fine grain sand beaches for collection.
Tombolo not suitable for stranding oil because of sheer access.

Strategy 2-110.2 Objective: Alternative techniques

ACP DATE

Alternative should be carefully considered since this site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Deploy a large offshore skimming effort. Use of large vessels for deployment of ocean boom to divert oil past pocket coves and tombolo.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
c) Pre-clean debris from shoreline.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-110.1	1500				12	12 x 25-40#	2					6	
2-110.2	0	0	0	0	0		0	0	0	0	On-water Recovery / ART		

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1, site is between Fort Ross and Sea Ranch. Site is approximately two miles south of Sea Ranch. Site includes the wave-cut rocky platforms around the headland at Stewart's Point and the large offshore rock, Stewart's Point Island.

LAND ACCESS: Private locked access for vehicles - contact Stewarts Pt store.

WATER LOGISTICS: Dangerous surf possible; submerged rocks
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Beach launching possible across beach under calm conditions with heavy 4WD vehicle.

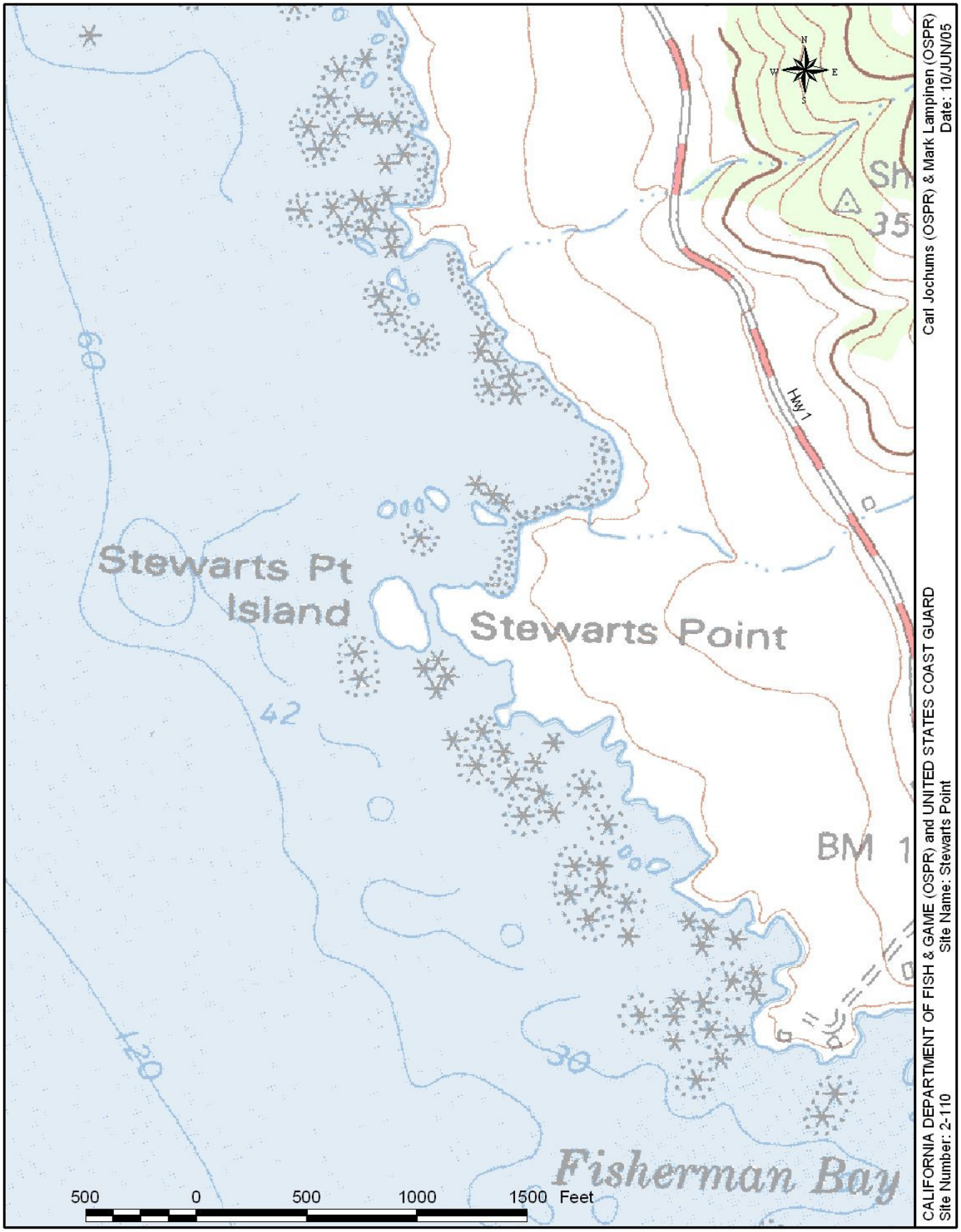
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging areas would be on private land at access road (contact Stewarts Pt Store) to Stewarts Pt. Access road is just north of Stewarts Pt store.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communication via two-way radio and landline only.



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-113 -B Site Summary- Gerstle Cove 2-113 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 34	123 20
USGS Quad:	**7.5" Quad: Plantation, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

A small cove within Salt Point State Park. This site is primarily a rocky boulder intertidal habitat with a pocket beach of mixed sand, cobbles, and boulders at the base of the public access ramp. It is located within Salt Point State Park and is a designated State Ecological Reserve.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year. A State Ecological Reserve.
Shorebirds are present all year but especially abundant during spring and fall migration.
Intertidal plants and animals, abalone, mussel beds and tidepools are present all year.

RESOURCES OF PRIMARY CONCERN

Extensive rocky intertidal and subtidal habitat, including tidepools and algal beds. This site is an ecological reserve.

Intertidal areas used by a variety of shorebirds throughout the year but especially during spring and fall migrations.

Harbor seals may use rocky intertidal areas near the cove to haul out throughout the year.

Kelp forests are present offshore during the summer and into late fall. Abalone are abundant here.

The intertidal rocky platforms support mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Salt Point State Park Ranger	CA Dept. of Parks & Recreation	(707) 847-3221

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 34	123 20

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Contamination and injury to rocky intertidal plants and animals, and shorebirds. Pooling of oil under rocks during low energy periods. Saturation of coarse grain sand beaches.

HAZARDS and RESTRICTIONS:

Potentially dangerous surf, vertical bluffs, slippery and uneven walking surface on rocky intertidal areas. High winds on bluffs.

SITE STRATEGIES

Strategy 2-113.1 Objective: Deflection under favorable conditions to sandy beach areas

ACP DATE 1/1/1996

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible, and booming is generally unfeasible due to wave energy in a boulder strewn area. When water conditions do permit, divert oil away from haulout areas toward fine grain sand beaches for collection.

Strategy 2-113.2 Objective: Alternatives to mechanical protection and cleanup

ACP DATE

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy. Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)

Strategy 2-113.3 Objective: Shoreline Cleanup possibilities

ACP DATE

Inspect shoreline for possible precleaning, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-113.1	1500				12	12 x 25-40#	2						6	
2-113.2	0	0	0	0	0		0	0	0	0		On-water Recovery / ART		
2-113.3	0	0	0	0	0		0	0	0	0				

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 101 to Santa Rosa, take Hwy 12 west to Hwy 116, continue west to Hwy 1 at Jenner on the coast. Proceed north on Hwy 1 to Salt Point State Park, north of Fort Ross. Exit at park entrance and proceed to Gerstle Cove parking area. A small cove within Salt Point State Park.

LAND ACCESS: Asphalt one-lane road to beach; no turnaround.

WATER LOGISTICS: Dangerous surf possible, submerged rocks
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Carry-in boats can be launched at beach.

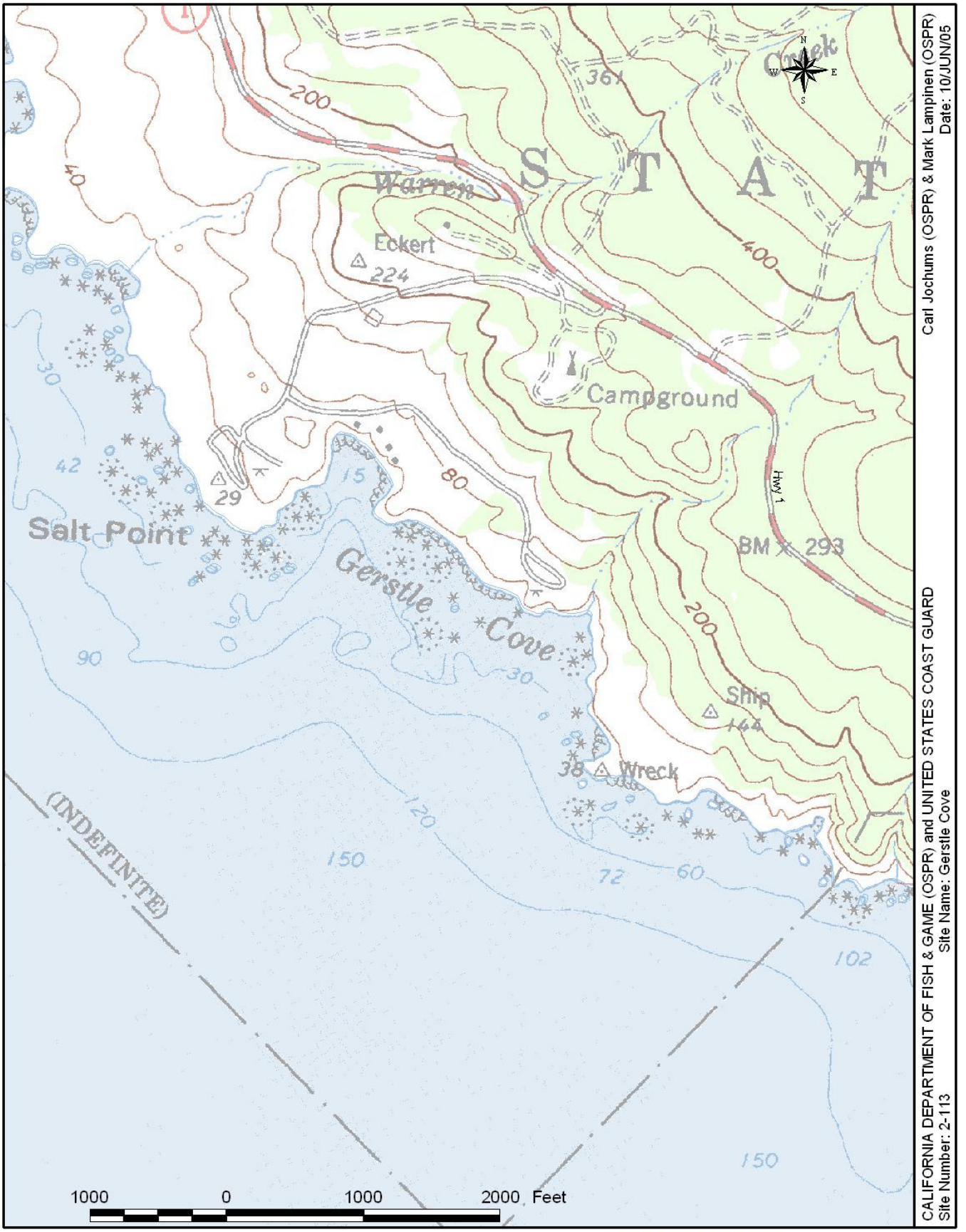
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging can be done on Park grounds. There is a paved area at beach headquarters. Sanitation and water available at this site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Communications via two-way radio and landline only.


Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Gerstle Cove
Site Number: 2-113
Warren
Eckert
224
Campground
Hwy 1
BM 293
Salt Point
Gerstle Cove
Ship
Wreck
(INDEFINITE)
1000 0 1000 2000 Feet
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-116 -B Site Summary- Stillwater Cove

2-116 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 32	123 17
USGS Quad:	**7.5" Quad: Plantation, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes the rocky shoreline of this small cove and the stream which flows into the cove. Primarily rocky boulder intertidal habitat with a pocket beach (70' long x 30' wide) of mixed sand, cobbles, and boulders at the base of the public access path. A stream flows into the cove (Stockoff Creek).

Protected cove and quite calm during good weather.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" all year.

RESOURCES OF PRIMARY CONCERN

Steelhead trout migrate through the stream from November to April which flows into the cove. Rocky intertidal and shallow subtidal fish, invertebrates, kelp forests and algae present along the rocky shores.

Is B priority all year.

Steelhead trout. Kelp forests are present offshore during the summer and into late fall.

The intertidal rocky areas support mussel beds; rich assemblages of algae and invertebrates; tidepools with anemones, fishes, snails and crabs.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Bill Cox	CA Dept. of Fish & Game	(707) 823-1001

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 32	123 17

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Burial of oil from accreting sand in protected cove could occur.

HAZARDS and RESTRICTIONS:

Submerged rocks, extreme surf everywhere except at apex (beach) of crescent shaped cove.

SITE STRATEGIES

Strategy 2-116.1 Objective: Alternatives to mechanical means.

ACP DATE 1/1/1996

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Strategy 2-116.2 Objective: Exclusion by diking

ACP DATE

Sediment dike or sandbag dam with culvert.

Strategy 2-116.3 Objective: Shoreline Cleanup: remove oil from rocky intertidal areas.

ACP DATE 1/1/1996

Medium to high pressure wash with ambient temperature flush on rocks depending on type and weathering of oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-116.1	0	0	0	0		0	0		0	0	On-water Recovery / ART		
2-116.2	0	0	0	0	0		0	0	0		0		
2-116.3	0	0	0	0		0	0		0	0	Pressure washers, pumps	12	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Located approximately 2-3 miles south of Salt Point State Park off Hwy 1 Site includes the rocky shoreline of this small cove and the stream which flows into the cove.

LAND ACCESS: Truck access to beach at Hwy 1 marker 37.17

WATER LOGISTICS:
Limitations: depth, obstruction — Submerged wash rocks, large waves.

Launching, Loading, Docking and Services Available: — Small boats can be hand launched from the beach.

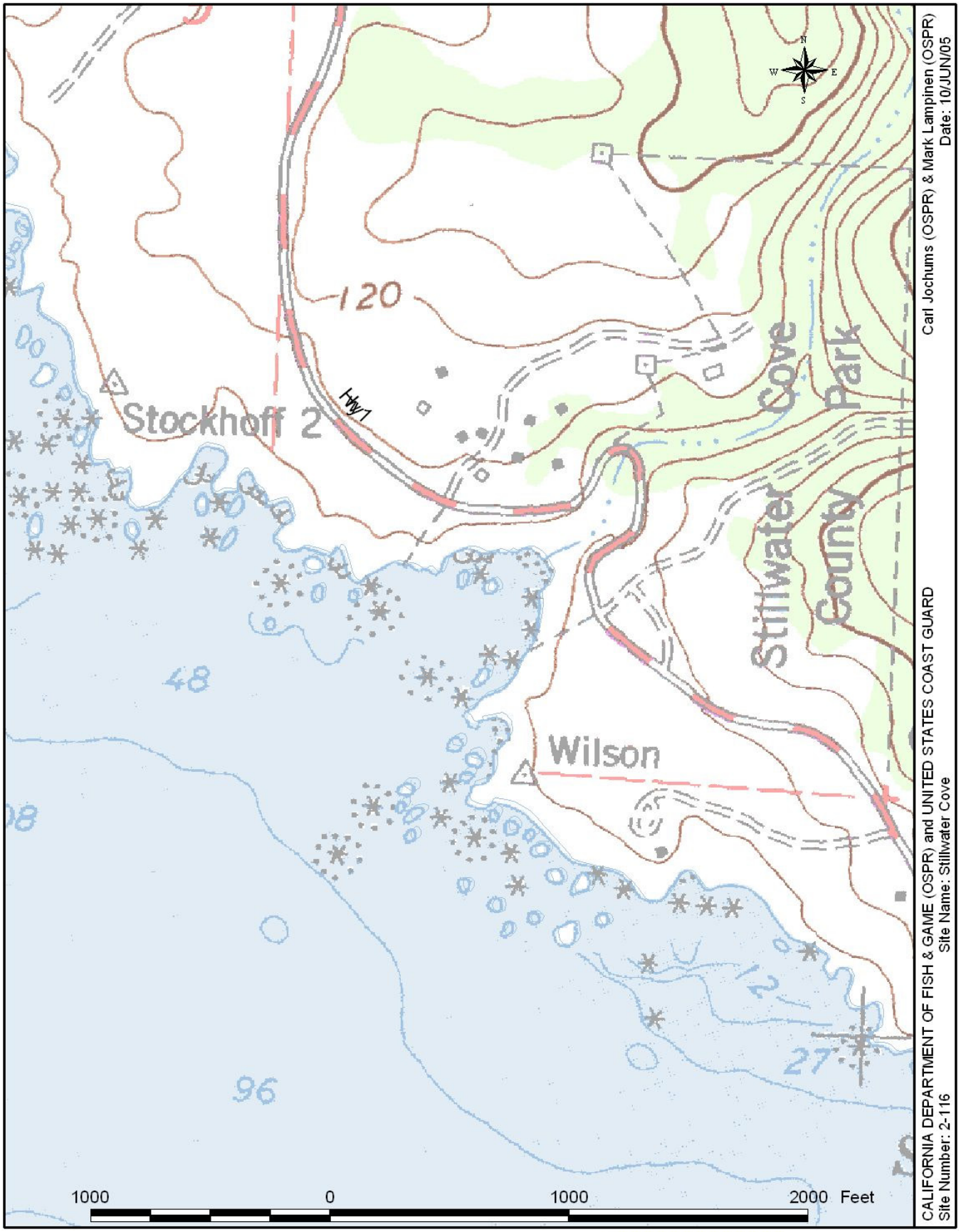
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Main staging area would be a County Park. Limited at the beach for decon, etc. Park ranger can open gate to beach.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Landline only for communications


120
Hwy1
Stockhoff 2
Stillwater Cove County Park
Wilson
48
96
12
27
1000
0
1000
2000 Feet
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Stillwater Cove
Site Number: 2-116
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-119 -B Site Summary- Russian Gulch 2-119 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 28	123 08
USGS Quad:	**7.5" Quad: Arched Rock, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Sand beach between headlands and creek/lagoon which flows across the beach. Small seasonal stream flows across coarse-grained sand beach. Stream can run strong at times. A thick riparian corridor is present along the creek between the parking lot and the beach. Beach is occasionally washed over by large waves or tides. A lagoon is often present behind beach berm. Area is within Russian Gulch County park.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "B" November through May for anadromous fish runs.

RESOURCES OF PRIMARY CONCERN

Steelhead trout and coho salmon present in the stream during the winter months. Marsh vegetation and riparian habitat in and along the stream.

A variety of seabirds (common murres, cormorants, grebes, gulls) and shorebirds (willets, plovers, sanderlings) use the beach and nearshore waters for foraging. A wide variety of terrestrial songbirds use the riparian habitat along the stream.

Coho salmon and steelhead trout.

Marsh vegetation in stream.

Thick riparian habitat along stream from parking lot to the beach.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Bill Cox	CA Dept. of Fish & Game	(707) 823-1001

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 28	123 08

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Burial of oil in coarse sediments.

HAZARDS and RESTRICTIONS:

Heavy surf. Subject to large waves.

SITE STRATEGIES

Strategy 2-119.1 Objective: Exclude oil from entering stream. Contain oil at lower part of stream. ACP DATE 7/1/2005

a) Construct sediment dike using heavy equipment small bulldozer or bobcat. Construct an underflow dam. Depending on tides and waves conditions, the beach berm may have to be built up to prevent washover into lagoon.

b) Protect marsh vegetation with sorbent boom trailing along shoreline (north side of river).

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-119.1	0			500					0		Small dozer or bobcat	12	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 just north of the Russian River exit at Jenner-Russian Gulch Park. Sand beach between headlands and creek/lagoon which flows across the beach.

LAND ACCESS: Russian Gulch parking is adjacent to Hwy 1. Access by foot trail.

WATER LOGISTICS: Possible submerged rocks, large surf
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: None

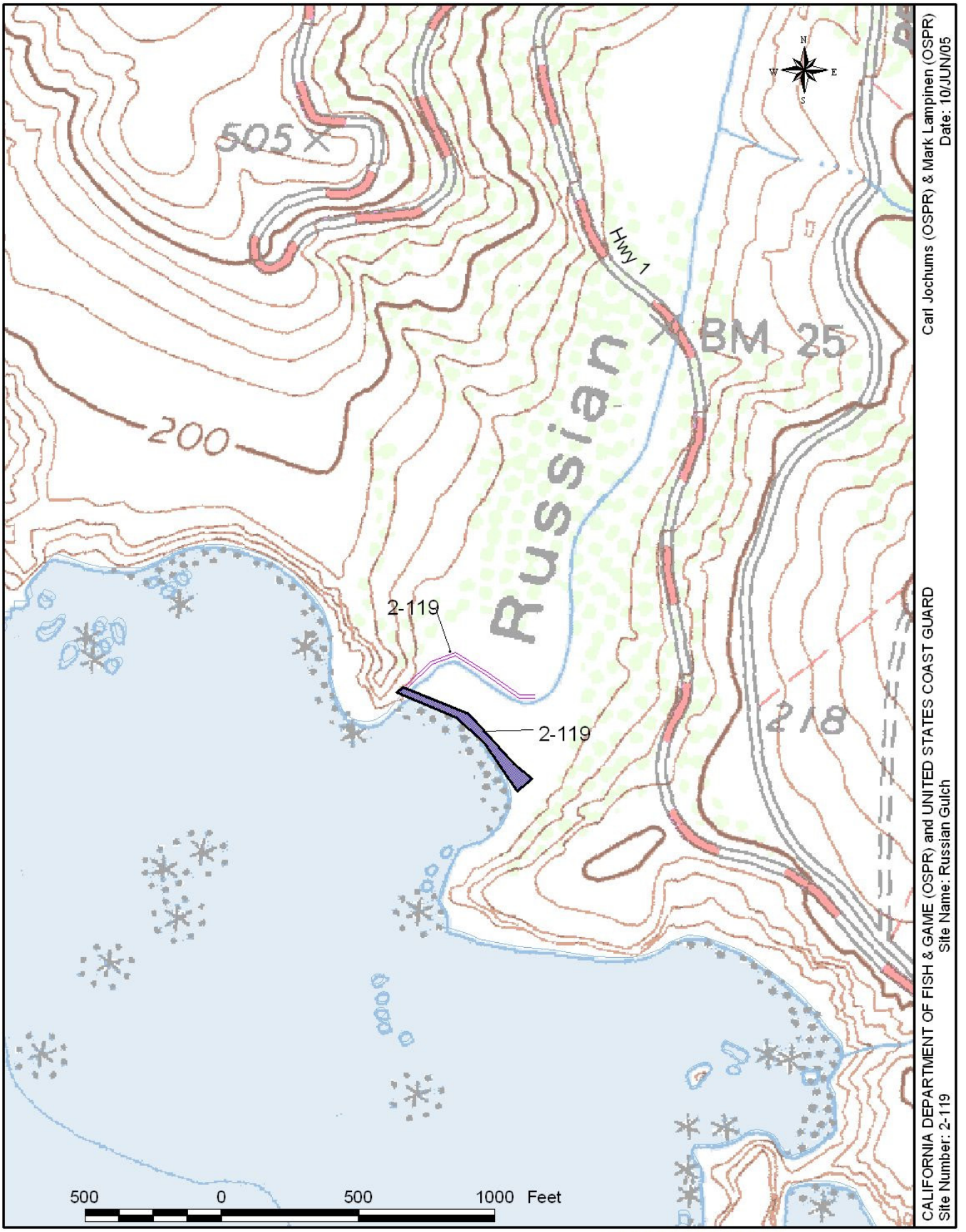
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Parking lot at Russian Gulch State Park.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

May have to construct access road with heavy equipment.


505
200
Hwy 1
Russian
BM 25
218
2-119
2-119
N
W
E
S
500 0 500 1000 Feet
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Russian Gulch
Site Number: 2-119
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-122 -A Site Summary- Russian River Inlet - Mouth and Estuary 2-122 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 28	123 07
USGS Quad:	**7.5" Quad: Arched Rock, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

This large coastal river has a mouth that may vary from a few yards wide in summer to more than 100 yards wide in winter. Tidal influence reaches several miles upriver. Principal area of concern is the reach between the beach and Hwy 1 bridge. This is a large river inlet with sandy beaches to either side of the opening. Opening may close during the drier summer months, although large waves will wash over sand spit. Marshes are on both banks of the river. The town of Jenner is located along the northern river bank.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site all year.

RESOURCES OF PRIMARY CONCERN

Freshwater marsh and riparian habitat. A major harbor seal haul-out area on the beach at the river mouth all year (100's of seals). Anadromous fish migrate through the river and reside in the lagoon. Waterfowl and wading birds use the river for nesting and foraging.

Cormorants, shorebirds, and waterfowl (dabbling and diving ducks, mergansers, grebes, loons).

Harbor seals, river otters.

Salmon (king and silver) and steelhead trout.

Freshwater marshes are present along both sides of the river. Some riparian habitat is present along the south shore.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Bill Cox	CA Dept. of Fish & Game	(707) 823-1001
	Linda Hansen		(707) 942-0724

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 28	123 07

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Prevent penetration of coarse sediments along riprap on north side of river. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Extreme surf and swift current. Location and size of river mouth varies throughout the year.

SITE STRATEGIES

Strategy 2-122.1 Objective: Exclude oil from entering river.

ACP DATE 7/1/2005

a) Under low flow conditions, neap tides, non-stormy seas: Construct sediment dike (coarse-grained sand) across river mouth. Build up berm.
b) Under other conditions (more typical): Deploy a line of deflection booms to divert oil to coarse-grained sand catchment area on south shore of river channel. Use 50ft oil snares, 100ft sorbent boom to collect oil that may accumulate. If skimmable oil accumulates contact IC.

Strategy 2-122.2 Objective: Prevent spread of oil to river and beach area.

ACP DATE 7/1/2005

If catchment area is too limited, extend deflection booms from both sides of channel and divert oil to 50ft oil snares, 100ft sorbent boom. If skimmable oil accumulates contact IC.

Strategy 2-122.3 Objective: Oil Recovery by skimming

ACP DATE 7/1/2005

Use skimmer to collect oil when it accumulates in skimmable quantities. Get authorization from IC prior to using this collection strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-122.1	1200		50 os	100	12	9-12 / 25lb Danforth	0	3			dozer	12	
2-122.2	1200		50 os	100	12	9-12 / 25lb Danforth						10	
2-122.3	0	0	0	0	0		0	0	2	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

The inlet is located along Hwy 1 at Jenner. Access from Santa Rosa through Guernville or from Bodega Bay. Take Hwy 1 to Goat Rock Rd to reach the peninsula on the south side of the river mouth. This large coastal river has a mouth that may vary from a few yards wide in summer to more than 100 yards wide in winter. Tidal influence reaches several miles upriver. Principal area of concern is the reach between the beach and Hwy 1 bridge.

LAND ACCESS: Goat Rock Rd; Rivers End Resort, County Ramp - off Hwy 1

WATER LOGISTICS:
Limitations: depth, obstruction — River shallow in areas, large surf offshore

Launching, Loading, Docking and Services Available: Rivers End launch ramp on north side of river - Hwy marker 19
County ramp near Jenner Post Office, also north side of river.

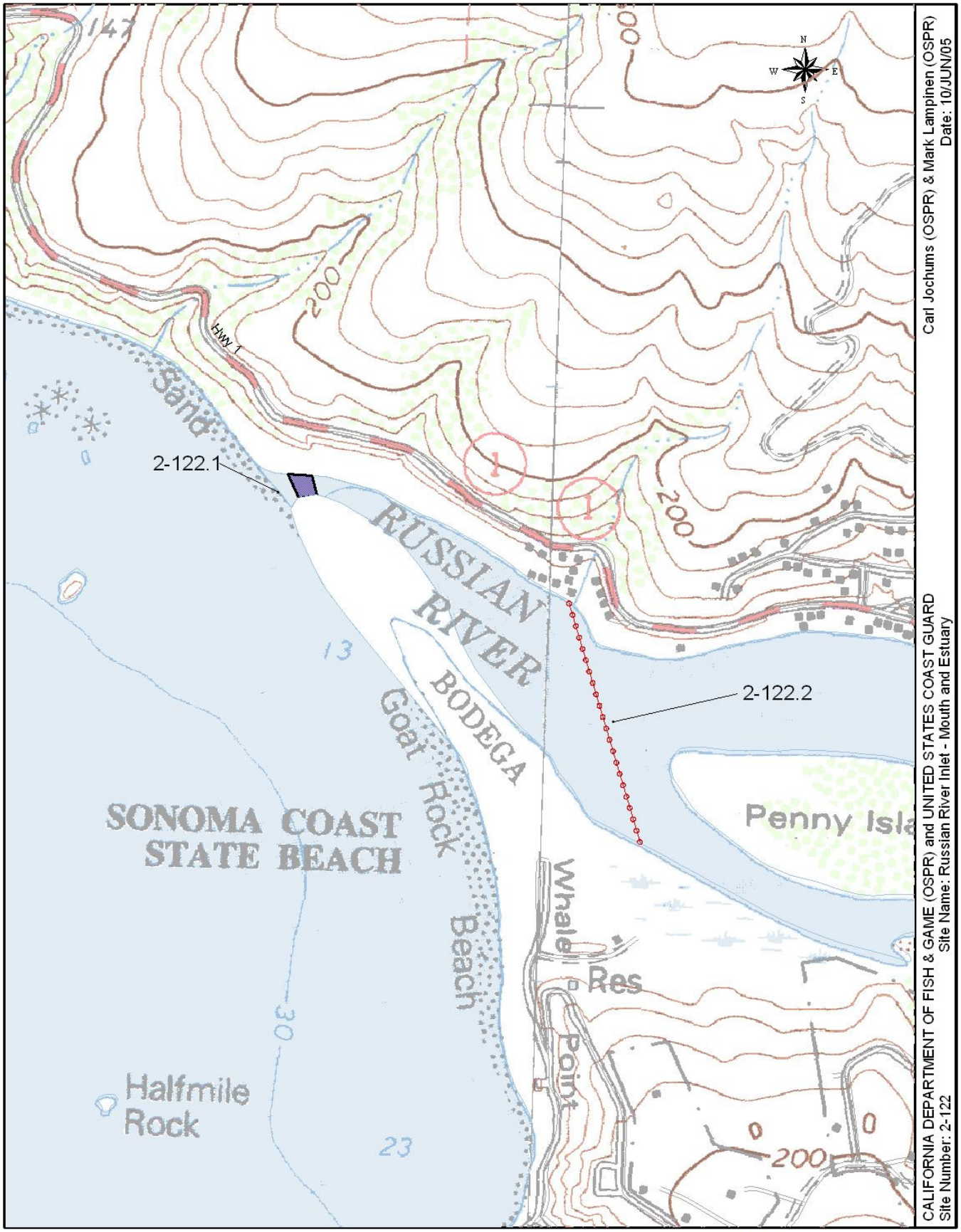
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Main staging area would be at Goat Rock State Park. Satellite staging area at River's End Resort.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Access is difficult under adverse conditions.


Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 10/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Russian River Inlet - Mouth and Estuary
Site Number: 2-122
2-122.1
2-122.2
RUSSIAN RIVER
BODEGA
Goat Rock Beach
SONOMA COAST STATE BEACH
Whale Point
Res
Penny Isla
Halfmile Rock
Sand
Hwy 1
200
147
13
30
23
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-125 -A/C Site Summary- Goat Rock Beach

2-125 -A/C

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 27	123 07
USGS Quad:	**7.5" Quad: Arched Rock, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Beach extends from the mouth of the Russian River south to Goat Rock. Medium-grained sand beach backed by large vegetated dunes. Beach is relatively wide and flat.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site from May through July during smelt spawning. Remainder of year (August - April) this is a priority "C" site.

RESOURCES OF PRIMARY CONCERN

During spring and summer surf (Day) smelt use the beach to lay their eggs and spawn.

Shorebird use greatest during spring and fall migrations.

Harbor seals haul out at north end of beach at Russian River mouth.

Surf (Day) smelt spawning spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Linda Hansen		(707) 942-0724
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 27	123 07

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

During smelt spawning oil and cleanup activities mat damage eggs in beach sand.

HAZARDS and RESTRICTIONS:

Extreme surf and strong currents.

SITE STRATEGIES

Strategy 2-125.1 **Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**

ACP DATE 7/1/2005

Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-125.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Off Hwy 1 south of Jenner, north of Bodega Bay. Access via Goat Rock Road. Beach extends from the mouth of the Russian River south to Goat Rock.

LAND ACCESS: Large trucks okay

WATER LOGISTICS:
Limitations: depth, obstruction: Large surf and breakers

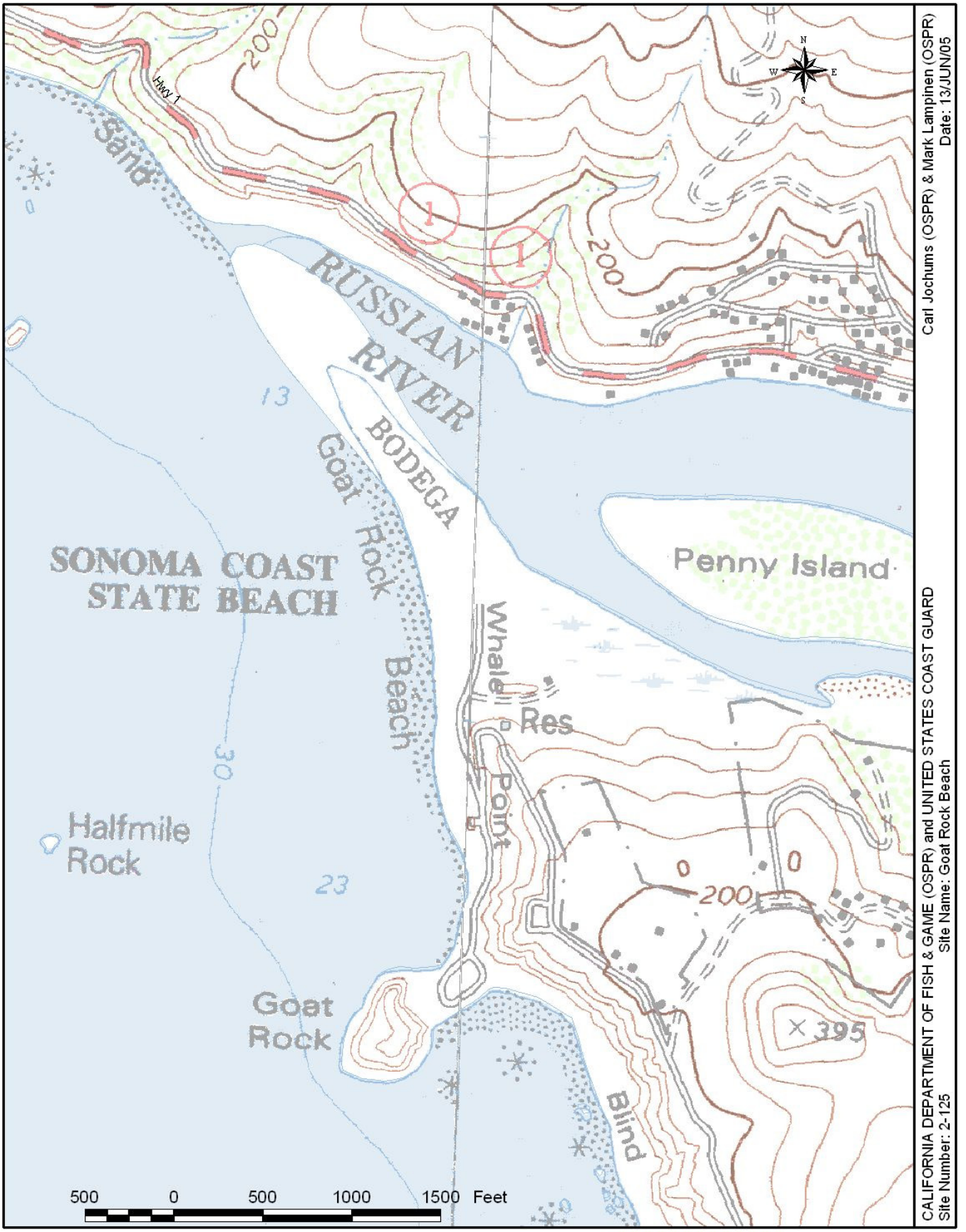
Launching, Loading, Docking and Services Available: None local. Bodega Bay is closest

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

County Park parking areas available at ends of beach. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 13/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Goat Rock Beach
Site Number: 2-125
Sand
Hwy 1
200
RUSSIAN RIVER
BODEGA
Goat Rock Beach
SONOMA COAST STATE BEACH
Penny Island
Whale
Res
Point
Halfmile Rock
Goat Rock
Blind
395
13
30
23
500 0 500 1000 1500 Feet
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 26	123 07
USGS Quad:	**7.5" Quad: Duncan Mills, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Beach extends from Goat Rock south to next rocky headland at Peaked Hill. Fine to medium-grained sand beach.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site from May through July during smelt spawning. Remainder of year (August - April) this is a priority "C" site.

RESOURCES OF PRIMARY CONCERN

During spring and summer surf (Day) smelt use the beach to lay their eggs and spawn.

Shorebird use greatest during spring and fall migrations.

Surf (Day) smelt spawning spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 26	123 07

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

HAZARDS and RESTRICTIONS:

Extreme surf and strong currents.

SITE STRATEGIES

Strategy 2-128.1 **Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**

ACP DATE 7/1/2005

Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-128.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Off Hwy 1 south of Goat Rock State Park, north of Bodega Bay. Beach extends from Goat Rock south to next rocky headland at Peaked Hill.

LAND ACCESS: Large trucks okay

WATER LOGISTICS: Large surf and breakers
Limitations: depth, obstruction

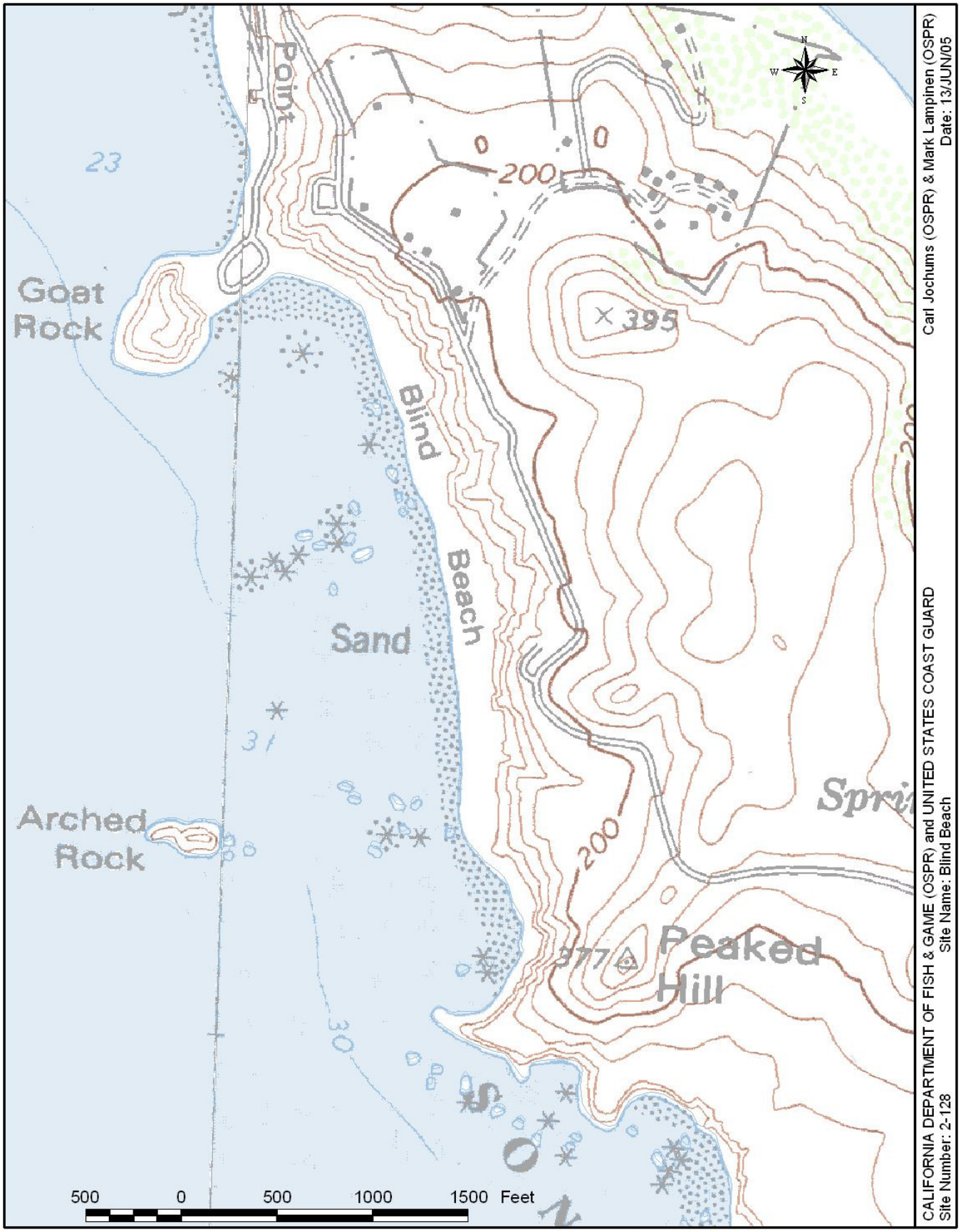
Launching, Loading, Docking and Services Available: None local. Bodega Bay is closest

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

County Park parking areas available at ends of beach. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-131 -A/C Site Summary- Wright's Beach

2-131 -A/C

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 24	123 06
USGS Quad:	**7.5" Quad: Duncan Mills, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Beach extends approximately one mile northward up the coast from Death Rock. Fine- to medium-grained sand beach.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site from May through July during smelt spawning. Remainder of year (August - April) this is a priority "C" site.

RESOURCES OF PRIMARY CONCERN

During spring and summer surf (Day) smelt use the beach to lay their eggs and spawn.

Shorebird use greatest during spring and fall migrations.

Surf (Day) smelt spawning spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 24	123 06

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

HAZARDS and RESTRICTIONS:

Extreme surf and strong currents.

SITE STRATEGIES

Strategy 2-131.1 **Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**

ACP DATE 7/1/2005

Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-131.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 a few miles north of Bodega Bay. Beach extends approximately one mile northward up the coast from Death Rock.

LAND ACCESS: Large trucks okay

WATER LOGISTICS: Large surf and breakers
Limitations: depth, obstruction

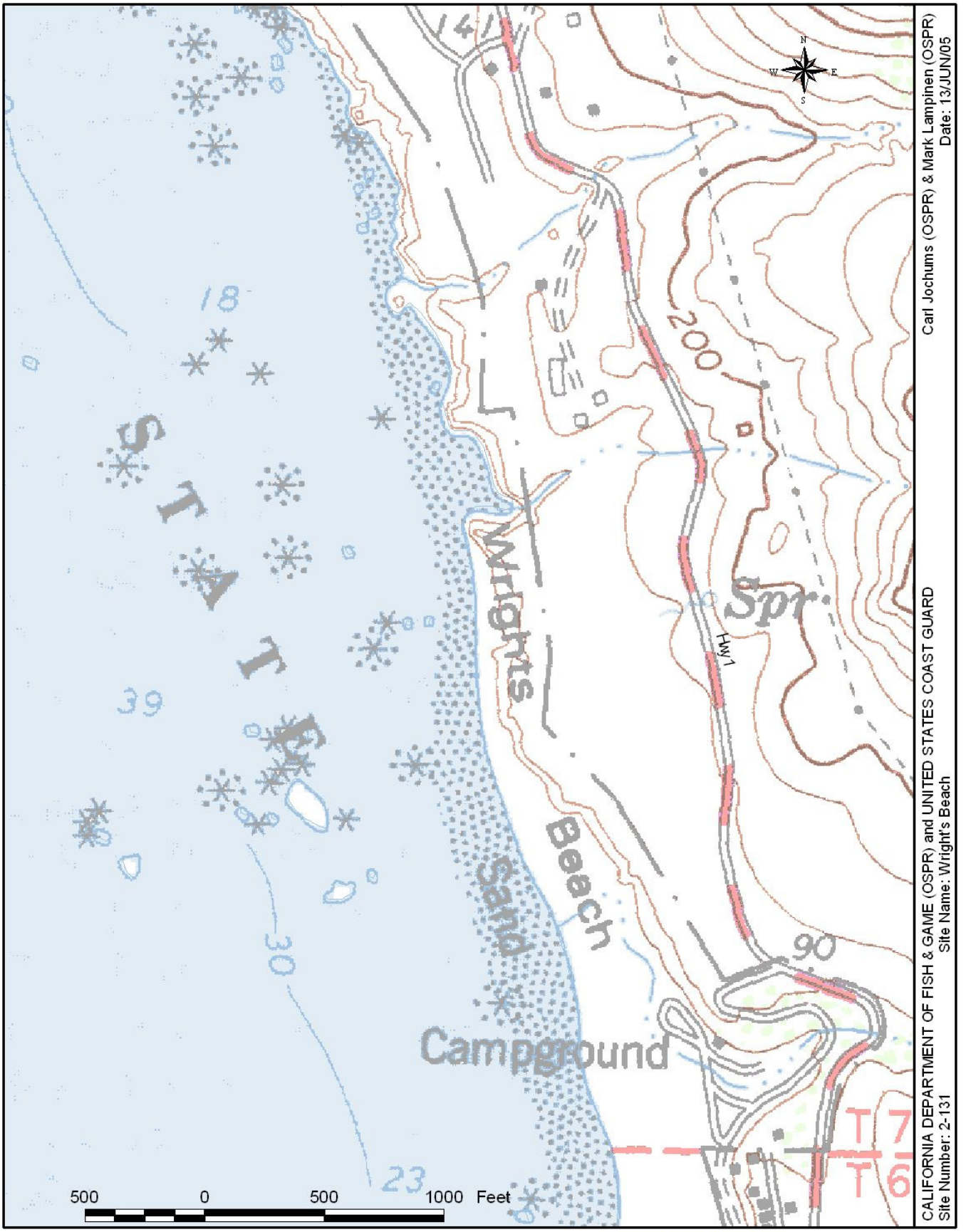
Launching, Loading, Docking and Services Available: None local. Bodega Bay is closest.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Parking lot at beach level for staging and access to beach. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


Wrights Beach
Sand
Campground
Spr.
HWY 1
200
90
T 7
T 6
18
39
30
23
500 0 500 1000 Feet
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Number: 2-131
Site Name: Wright's Beach
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 13/JUN/05
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-134 -A/C Site Summary- Gleason Beach

2-134 -A/C

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 24	123 06
USGS Quad:	**7.5" Quad: Duncan Mills, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

County Beach north of Salmon Creek. Fine- to medium-grained sand beach.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site from May through July during smelt spawning. Remainder of year (August - April) this is a priority "C" site.

RESOURCES OF PRIMARY CONCERN

During spring and summer surf (Day) smelt use the beach to lay their eggs and spawn.

Shorebird use greatest during spring and fall migrations.

Surf (Day) smelt spawning spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 24	123 06

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

HAZARDS and RESTRICTIONS:

Extreme surf and strong currents.

SITE STRATEGIES

Strategy 2-134.1 **Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**

ACP DATE 7/1/2005

Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-134.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 north of Bodega Bay and Salmon Creek. County Beach north of Salmon Creek.

LAND ACCESS: Large trucks okay

WATER LOGISTICS:
Limitations: depth, obstruction: Large surf and breakers

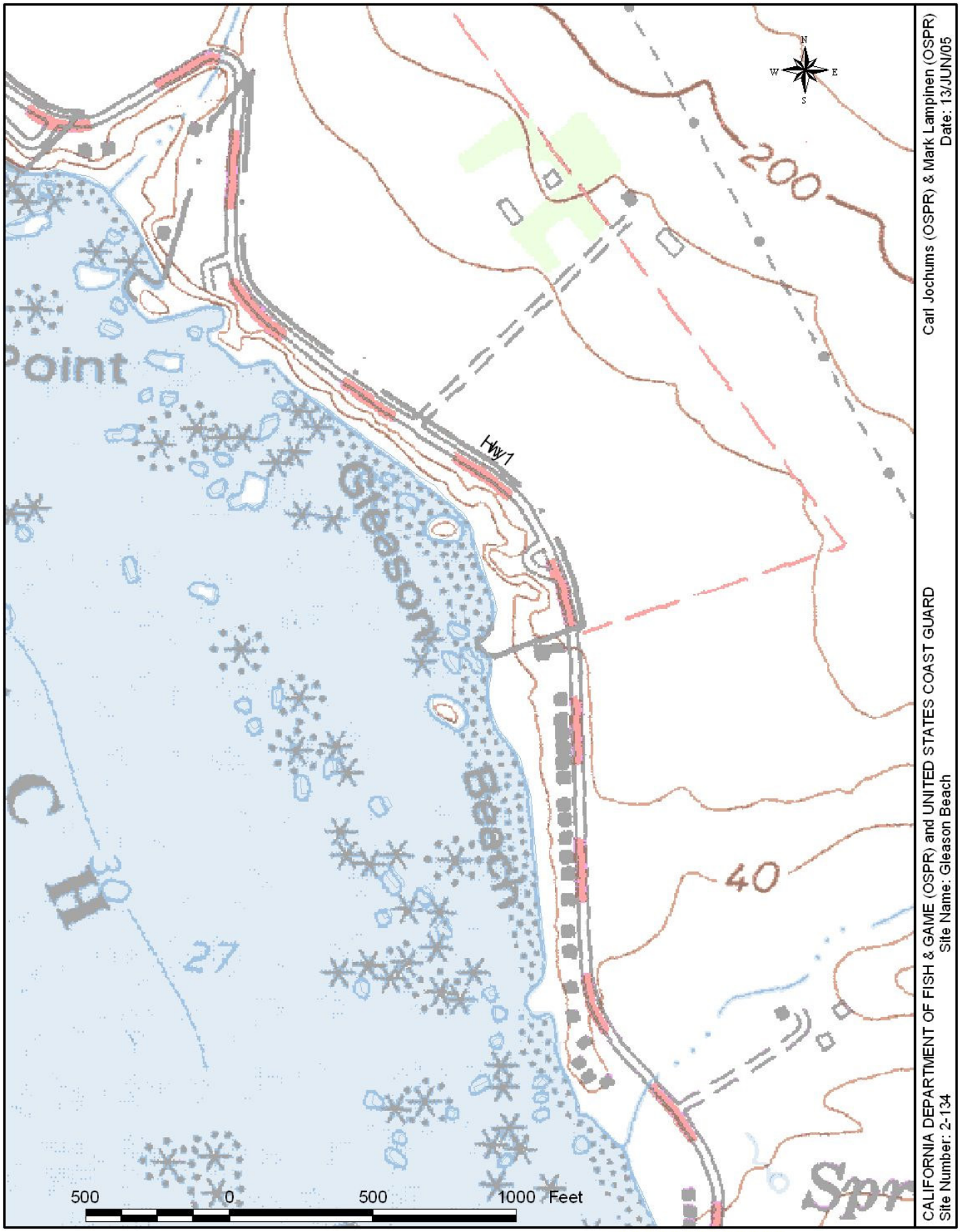
Launching, Loading, Docking and Services Available: None local. Bodega Bay is closest.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Parking lot along Hwy 1above beach will provide a small staging area. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-137 -A/C Site Summary- Portuguese Beach

2-137 -A/C

County:	Sonoma	Thomas Guide Location	Sonoma County	Latitude N	Longitude W
USGS Quad:	7.5" Quad: Duncan Mills, CA	NOAA Chart:	18640	3 8 23	123 06

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Fine- to medium-grained sand beach.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "A" site from May through July during smelt spawning. Remainder of year (August - April) this is a priority "C" site.

RESOURCES OF PRIMARY CONCERN

During spring and summer surf (Day) smelt use the beach to lay their eggs and spawn.

Shorebird use greatest during spring and fall migrations.

Surf (Day) smelt spawning spring and summer.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 23	123 06

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

During smelt spawning oil and cleanup activities may damage eggs in beach sand.

HAZARDS and RESTRICTIONS:

Extreme surf and strong currents.

SITE STRATEGIES

Strategy 2-137.1 **Objective: Minimize oiling and cleanup response vehicle traffic through intertidal zone of beach from May through August.**

ACP DATE 7/1/2005

Because of high wave energy conditions at this site, mechanical shoreline protection techniques (booming) may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibility of alternative response technologies (e.g. dispersant and in-situ burning)
b) Booming is generally unfeasible due to wave energy. As water conditions permit, divert oil toward fine grain sand beaches for collection.
c) Inspect shoreline for possible precleaning.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-137.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy1 north of Bodega Bay and Salmon Creek.

LAND ACCESS: Large trucks okay

WATER LOGISTICS: Large surf and breakers
Limitations: depth, obstruction

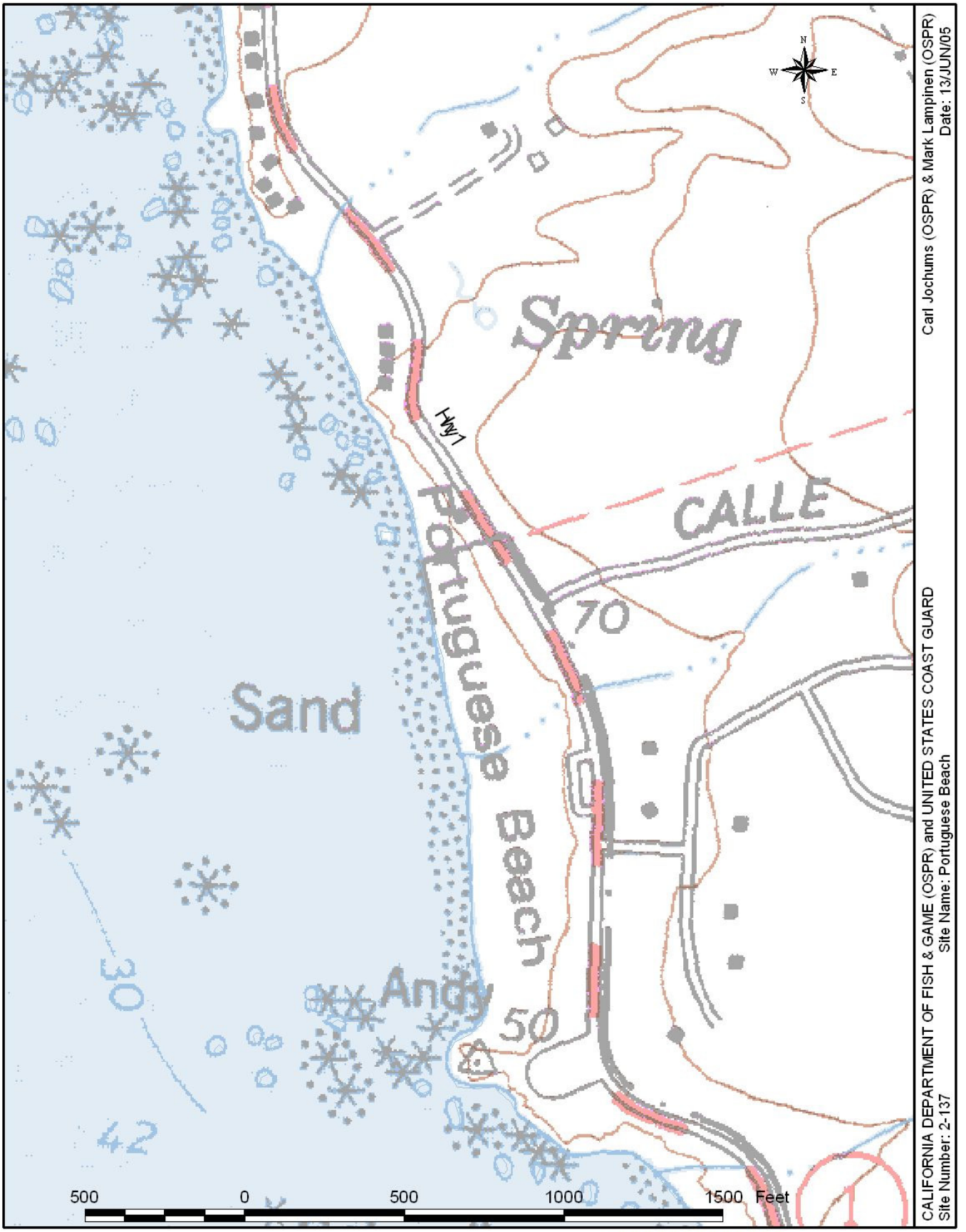
Launching, Loading, Docking and Services Available: None local. Bodega Bay is closest.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Large parking lot above beach for staging. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


Spring
CALLE
Hwy 1
Portuguese Beach
70
Sand
Andy
30
50
42
500 0 500 1000 1500 Feet
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Portuguese Beach
Site Number: 2-137
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 13/JUN/05
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 04	123 21
USGS Quad:	**7.5" Quad: Bodega Head, CA**	NOAA Chart: **18640**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Salmon Creek mouth and tidal creek banks. A sandbar closes the mouth of this river during the summer and early fall when freshwater flow stops and a lagoon develops behind the bar. There are extensive freshwater wetlands on the north shore near the Hwy 1 bridge.

SEASONAL and SPECIAL RESOURCE CONCERN

Fall and winter months are the most sensitive time of year due to concentrations of shorebirds, waterfowl and anadromous fishes.

RESOURCES OF PRIMARY CONCERN

The endangered species and marshes near the mouth of this creek and in the lagoon are an A priority all year. Migratory shorebirds and waterfowl use the shores and lagoon throughout the fall and winter. Anadromous fish migrate upstream October through April, while juvenile fish may be present in the lagoon throughout the spring and summer months (Feb.-June). The sand dunes along the beach and south river bank are vulnerable to personnel and vehicle traffic in the event of a spill response and cleanup.

The western snowy plover (Federally Threatened) forage and nest on the sand beach near the creek mouth all year. Migratory shorebirds and waterfowl use the shores and the lagoon throughout the fall and winter months. Peregrine falcons (Federally Endangered) are known to forage in this area.

River otters are likely to be present in the river system.

The tidewater goby (Federally Endangered and State Species of Special Concern) is present in the creek from the mouth to one mile upstream. Anadromous fishes (steelhead and coho salmon (State and Federally Threatened)) begin migrating into the river to spawn in October and continue through April. Salmon and steelhead smolts then reside in the river system and lagoon from February through June during out-migration.

Extensive freshwater marshes are present along the river banks. They are especially dense along the northern shore near the Hwy 1 bridge.

Extensively vegetated sand dunes are located along the south shore of the river and back beach.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ken Oda	CA Dept. of Fish & Game	(650) 631-2534

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	18640	3 8 04	123 21

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

If oil gets into creek it may impact sensitive marsh habitat , anadromous fishes and other sensitive species. Snowy plovers (an endangered shorebird) nest along the foredune above the high tide line from March through August. All traffic must be kept out of this area when birds are present. Prevent and minimize foot and vehicle traffic through the sand dunes.

HAZARDS and RESTRICTIONS:

Steep cliff area - access is by steep trail.

SITE STRATEGIES

Strategy 2-140.1 Objective: Exclude oil from entering the creek and oiling marshes. ACP DATE 7/1/2005

In addition to on-water recovery efforts, the following site specific protection measures should also be carried out:
For situations of low-flow or no-flow river conditions:
- Construct a sediment dike if the river is isolated from the ocean by a sand berm. Sediment should be taken from the beach face south of the river mouth (not the sand dunes). The washover terrace requiring reinforcement maybe 300 meters (1000 feet) wide. It is recommended that a shallow ditch (a runnel) be constructed on the backside of the dike to catch any oil that washes over the top.

Snowy plovers (an endangered shorebird) nest along the foredune above the high tide line from March through August. All traffic must be kept out of this area when birds are present.

Strategy 2-140.2 Objective: Exclude oil from entering and moving upstream in the creek and from oiling marshes. ACP DATE 7/1/2005

In addition to on-water recovery efforts, the following site specific protection measures should also be carried out:
For situations when river is open to the ocean and tidal exchange occurs:
- Boom across the river will be necessary when tidal flows into the river may occur during flood tides. Deploy 2000 ft. of boom having at least 8 inches of freeboard/floatation and 6 inches of draft/skirt. Backup the primary boom with a second deployment to catch entrained oil.

The preferred oil collection location (north or south river bank) may vary depending on conditions. The south shore is sand beach yet more remote; while the north shore is mixed sand and gravel, but provides better logistical access below the parking area along Hwy 1. In all cases, responders must consider the wind direction and expected current velocity when determining boom deployment angles and shoreline recovery areas.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-140.1	0										Bulldozers or front-end loaders (2-3)	10	
2-140.2	2000				12	12 / 20 lb.	0	4			1 crane	30	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Take Hwy 1 north of Bodega Bay. Turn into parking lot at north end of Salmon Creek mouth. Salmon Creek mouth and tidal creek banks.

LAND ACCESS: Good access to parking areas north and south of creek.

WATER LOGISTICS: Shallow creek, skiffs only.
Limitations: depth, obstruction

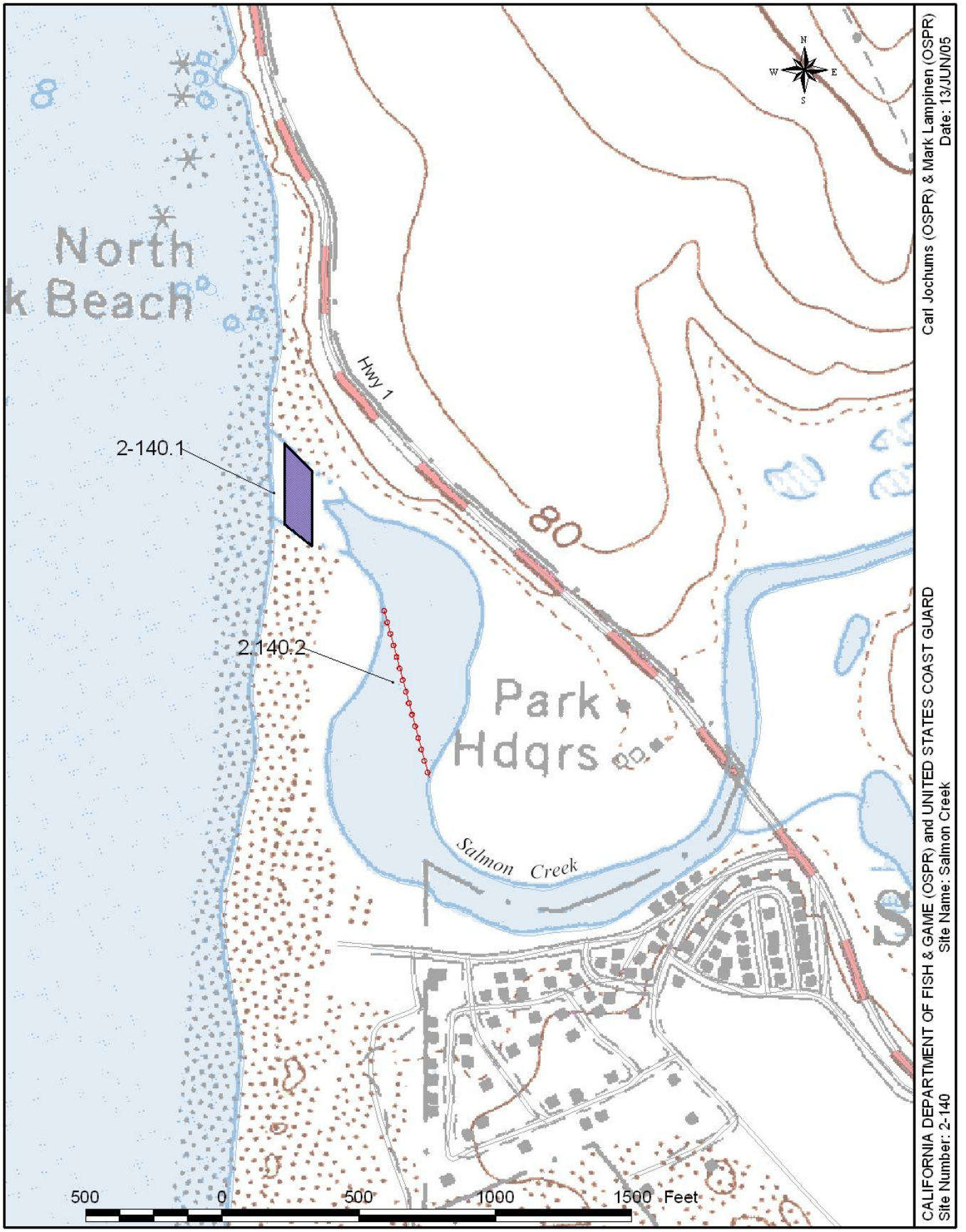
Launching, Loading, Docking and Services Available: Hand launch skiffs over south creek bank beach.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

State Park parking areas available on north and south sides of creek. Nearest facilities at Bodega Bay and Jenner.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


North
k Beach
Hwy 1
80
2-140.1
2-140.2
Park
Hdqrs
Salmon Creek
500 0 500 1000 1500 Feet
N
W
E
S
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 13/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Salmon Creek
Site Number: 2-140
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-143 -B Site Summary- Bodega Head 2-143 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 19	123 04
USGS Quad:	**7.5" Quad: Bodega Head, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Rocky headland extends 1+ miles from Mussel Point in the north to the tip opposite Bodega Rock in the south. Wave-cut rock platforms and exposed cliffs. Coarse sand beach in Horseshoe Cove.

SEASONAL and SPECIAL RESOURCE CONCERN

"B" priority all year. California sea lions haul out between August and April. Harbor seals haul out and seabirds nest and/or roost on the headland all year.

RESOURCES OF PRIMARY CONCERN

Seabird nesting and roosting habitat from Mussel Point to the southern tip of Bodega Head. Harbor seal and sea lion haul out area. Rich and diverse suite of intertidal organisms along the headland.

Pelagic cormorants, pigeon guillemots, black oystercatchers nest at the southern end of the headland.

Harbor seals and California sea lions commonly haul out on the rocks. Harbor seals pup in March through April.

Kelp forests and rocky subtidal habitat abundant with fishes, abalone, crabs, sea urchins and algae.

Extensive mussel beds and a diverse assemblage of invertebrates and algae.

Canopy forming kelp forests and subtidal kelp forests exist seasonally.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	James Clegg, Ph.D.	SF St. University, Romberg Tiburon Center	
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	Bodega and Tomales Bays 18643	3 8 19	123 04

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Prevent heavy oiling of the intertidal zone. Oil may smother intertidal organisms and pose detrimental effects to shorebirds.

HAZARDS and RESTRICTIONS:

Extremely dangerous surf, rocky headland and submerged rocks. High potential for fog.

SITE STRATEGIES

Strategy 2-143.1 Objective: Prevent oil from contaminating the intertidal zone of the headland. ACP DATE 7/1/2005

In addition to on-water recovery efforts the following site-specific protection measures should also be carried out:

a) Booming is unlikely to be effective in the heavy surf generally present along this shoreline. In-situ burning, dispersants, and other alternative response technologies should be given strong consideration as methods for reducing the volume of oil reaching the near-shore areas.

b) Where it is safe to do so it may be necessary to clean with hand labor the gravel beaches protected from the full force of the surf. It may be possible to use heavy equipment (graders, scrapers, loaders, and dump trucks) to clean the sand beach in Horseshoe Cove.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-143.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	50	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Bodega Bay. Take Bay Flat Road at north end of bay around to west side of bay and Bodega Head. Access shorelines along the head from parking areas and trails at the end of Bay Flat Road, Campbell's Cove, and Bodega Marine Lab. Rocky headland extends 1+ miles from Mussel Point in the north to the tip opposite Bodega Rock in the south.

LAND ACCESS: Large trucks okay on Bay Flat Road.

WATER LOGISTICS:

Limitations: depth, obstruction: submerged rocks and outcroppings, heavy surf

Launching, Loading, Docking and Services Available: Nearest boat launch inside Bodega Bay.

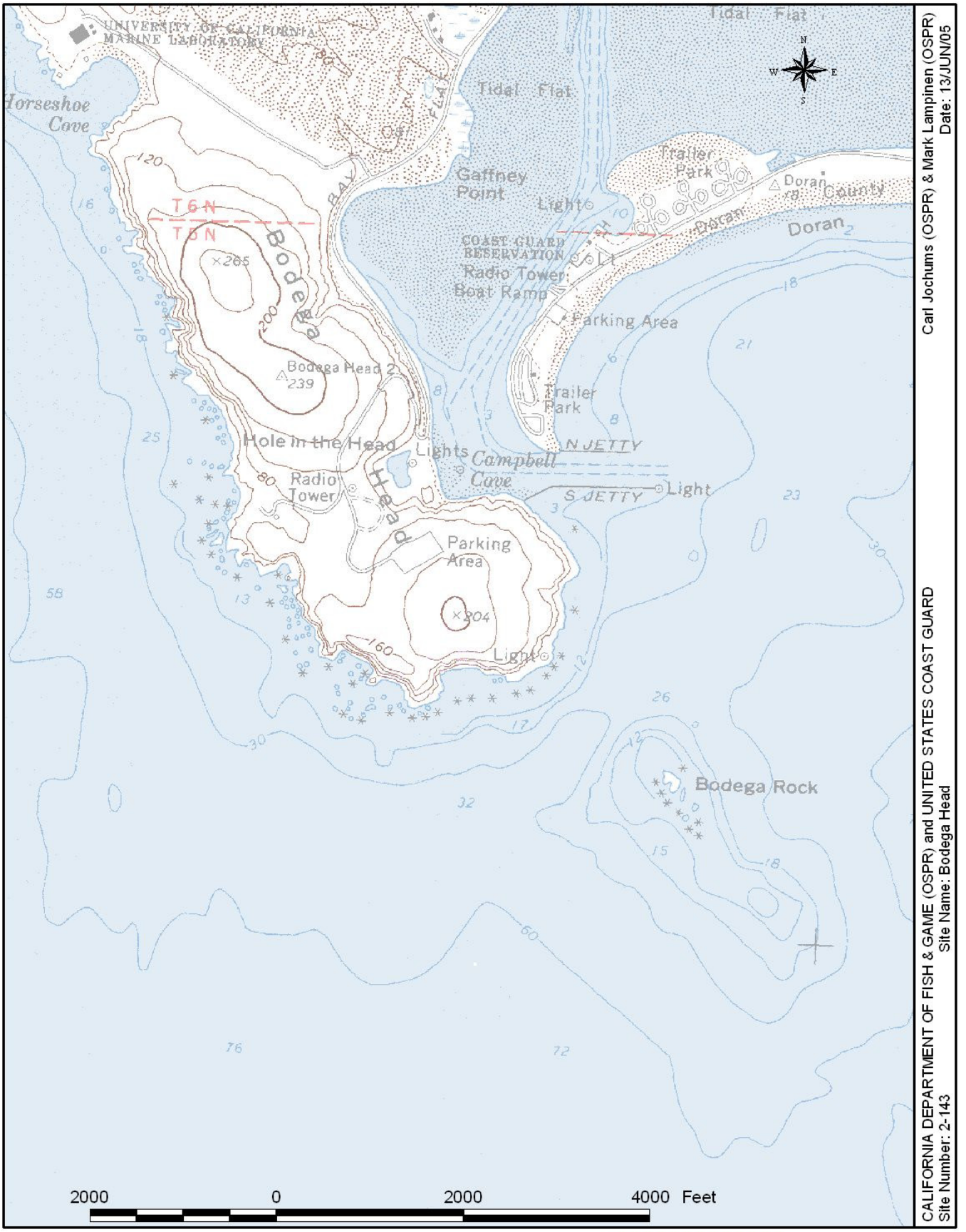
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Bodega Marine Lab and the parking lots on top of Bodega Head may serve as staging areas

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy has not been deployed or tested



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-146 -A Site Summary- Bodega Rock

2-146 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 18	123 03
USGS Quad:	**7.5" Quad: Bodega Head, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located approximately one-half kilometer SE of Bodega Head, outside the Bodega Harbor entrance. This site is located within the Gulf of the Farallones National Marine Sanctuary. Four offshore rock islands surrounded by several washrocks. Steep rock cliffs and rocky intertidal zones are typical habitats.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority A site March through August due to a large seabird rookery (>1200 birds in 1989) on the rocks. From September through February it is a B priority when the seabirds roost and pinnipeds haul out on the rocks. Pinnipeds haulout on the island shores all year.

RESOURCES OF PRIMARY CONCERN

Seabird rookery (>1200 birds in 1989) on the rocks, March through September. From September through February seabirds roost and pinnipeds haul out on the rocks. Pinnipeds haulout on the island shores all year.

Brandt's cormorants, small numbers of Western gulls, and black oystercatchers.

California sea lions and harbor seals

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	Bodega and Tomales Bays 18643	3 8 18	123 03

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil on this site would cause injury to seabirds and marine mammals.

HAZARDS and RESTRICTIONS:

Steep rock cliffs. Pounding surf. Wild animals (sea lions, harbor seals

SITE STRATEGIES

Strategy 2-146.1 **Objective: Prevent oiling of largest island and largest rocks used for marine mammal haul outs.**

ACP DATE 1/1/1996

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Can also use offshore skimming, manual removal, cold water flush and wash to remove pooled oil.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-146.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Bodega Bay. Via boat from the bay proceed to the islands immediately south of Bodega Head. Located approximately one-half kilometer SE of Bodega Head, outside the Bodega Harbor entrance. This site is located within the Gulf of the Farallones National Marine Sanctuary.

LAND ACCESS: Boat only

WATER LOGISTICS:
Limitations: depth, obstruction: Submerged rocks, heavy surf

Launching, Loading, Docking and Services Available: Boat launch from Bodega Bay.

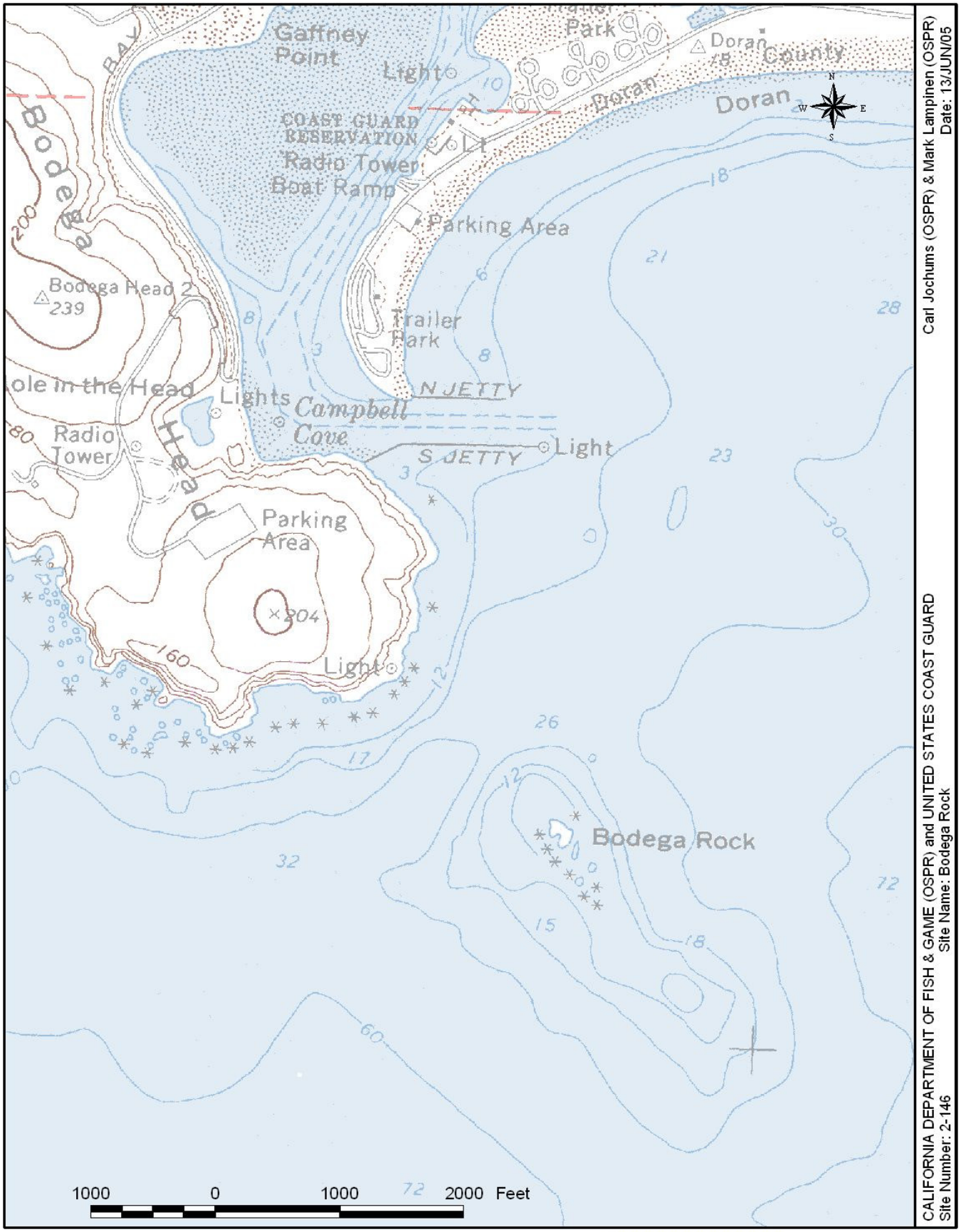
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Bodega Harbor will be the staging area for vessels responding to this site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy has not been deployed or tested.


Gaffney Point
Light
Doran Park
Doran County
Doran
COAST GUARD RESERVATION
Radio Tower
Boat Ramp
Parking Area
Trailer Park
Bodega Bay
Bodega Head
Bodega Head 2
239
Hole in the Head
Lights
Campbell Cove
N JETTY
S JETTY
Light
Radio Tower
Parking Area
304
Light
Bodega Rock
1000 0 1000 2000 Feet
Carl Jochums (OSPR) & Mark Lampinen (OSPR)
Date: 13/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Bodega Rock
Site Number: 2-146
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 19	123 03
USGS Quad:	**7.5" Quad: Bodega Head**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/2000

SITE DESCRIPTION:

Site includes the marshes, mudflats, beaches, piers and marinas within the confines of the harbor. The entrance to Bodega Harbor is open all year and is stabilized by rip-rap jetties on either side. Strong tidal currents are present near the harbor entrance. Within the harbor, there are extensive tidal flats, saltmarshes and eelgrass beds. The harbor provides habitat for threatened and endangered species as well as thousands of birds (shorebirds, wading birds, waterfowl). Two major marinas, with hundreds of vessels, are present in the upper bay. Bodega Harbor is located on the San Andreas rift zone.

SEASONAL and SPECIAL RESOURCE CONCERN

The marshes and mudflats throughout the bay are an "A" priority all year. They are habitat for several threatened and endangered plants and animals. Heaviest use by migratory seabirds and waterfowl is during fall and winter. Wading birds and seabirds are present throughout the year.

RESOURCES OF PRIMARY CONCERN

There are eelgrass beds and mudflats throughout the bay and wetlands on the north and east shores. They provide habitat for several threatened and endangered plants and animals. Heaviest use by migratory shorebirds, seabirds and waterfowl is during fall and winter. Wading birds and seabirds are present throughout the year.

The endangered brown pelican, peregrine falcon and bald eagle, and the threatened black rail use the bay. Large concentrations of shorebirds and wading birds forage on extensive mud flats, eelgrass beds, and in the salt and freshwater marshes. Loons, grebes, waterfowl (dabbling and diving ducks), gulls, cormorants, and seabirds are also common.

Harbor seals and sea lions are common inside the bay. A variety of terrestrial mammals also can be found around the bay including deer, raccoons, and river otter.

A variety of fish and invertebrates utilize the mudflats and marshes throughout the year. Herring enter the bay to spawn on eelgrass in the winter (Nov-Mar). Dungeness crab use the bay as a nursery area to spawn and grow.

Dense clam beds are common throughout the mudflat and rocky intertidal areas. A variety of worms and crabs also inhabit the mudflats and sandy intertidal areas.

A rare saltmarsh plant, the northcoast birds-beak, occurs in marshes throughout the bay. Eelgrass beds are present throughout the bay and provide habitat for number of fish and invertebrates. They provide forage for Black Brandt and other waterfowl.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sonoma 'Co Office	Sonoma, County of, Regional Park Dept.	(707) 865-2394
	James Clegg, Ph.D.	SF St. University, Romberg Tiburon Center	
	Doran County Regional Par Park Office	Sonoma, County of, Regional Park Dept.	(707) 875-3540
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	Bodega and Tomales Bays 18643	3 8 19	123 03

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

An oil spill in or reaching Bodega Harbor could have tremendous impacts on birds, wetland and eelgrass habitat, and clam beds. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow waters and mudflats exist throughout the bay outside of the main channels. Expect moderately strong flood currents near the harbor entrance. As of 1991, no quantitative data were available on the harbor's tidal currents.

SITE STRATEGIES

Strategy 2-150.1 **Objective: Exclude oil from entering the harbor.** ACP DATE 1/1/1998

Responders must consider wind direction and expected current velocity when deciding which shoreline to deflect the oil to. They should select an angle of the boom to wind and current that will maximize the effectiveness of the boom to deflect oil. Although the prevailing northwest wind may reduce the risk of oil entering the Bodega Harbor, local winds and currents may be very different from the prevailing offshore wind. These local conditions may work to pull oil into the harbor when least expected.

BODEGA HARBOR ENTRANCE

- Deploy deflection boom outside the jetties to direct oil away from the harbor entance and toward Doran County Beach. Avoid "venturi effect" at harbor entrance by deploying away from the mouth of the harbor. Use up to 5,000 feet of (harbor or ocean) boom. Oil recovery and storage equipment should be staged at Doran Beach if surf conditions and oil concentration permit.

Strategy 2-150.2 **Objective: Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.** ACP DATE 1/1/1998

BODEGA HARBOR ENTRANCE

- Deflect oil coming through the entrance channel to Campbell beach. Cascade six 300 foot sections of curtain (harbor) boom from the west end of the north jetty to Campbell beach. This is the beach location to strand oil. Two boom boats and a skiff will be needed. A shoreside skimmer and a portable storage device must be located at Campbell beach if significant amount of oil can be accumulated there.

Strategy 2-150.3 **Objective: Exclude oil from entering the harbor and moving onto the mudflats, eelgrass beds and/or wetlands.** ACP DATE 1/1/1998

BODEGA HARBOR ENTRANCE

- Prevent oil from passing through the jetties and oiling the the interior surfaces of the jetties. Consider the use of 2,000 feet of boom, fabric or some other material to protect the south side of the south jetty. The jetties are very porous, oil will readily pass through them and they will be difficult to impossible to clean. There is also a low spot near the base of the southern jetty where water flows over at high tide. Fill this gap with sandbags or a large quarry stone.

Strategy 2-150.4 **Objective: Prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.** ACP DATE 1/1/1998

INSIDE BODEGA HARBOR (alternative to #118.03 above)

- Oil may also be deflected to the northwest side of Doran spit inside the harbor by cascading several (300-500 ft.) sections of (harbor or swamp) boom from the north end of Campbell Beach to the northwest side of Doran spit. The beach here is narrow and backed by riprap. Almost no sand beach exists at high tide.

Strategy 2-150.5 **Objective: prevent oil from moving onto the mudflats, eelgrass beds and/or wetlands.** ACP DATE 10/1/2005

INSIDE BODEGA HARBOR

- The last line of defense of the tidal flats and eelgrass beds is to line both natural and dredged channels with 6,000 feet of curtain (harbor) boom and recover oil with skimmers strategically located in the channels. This hard boom should be backed by an equal amount of absorbent boom.

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Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-150.1	5000				30	30 x 40lb northhill	2	0			Oil recovery from shore	10	
2-150.2	1800				12	12 x 20lb	2	1	1		shoreside skimmer	14	
2-150.3	2000				12	12 x 30lb.	2	0	0		Filter fabric or boom; sand bags or rock	8	
2-150.4	2000				12	12 x 20 lb. Danforth	2	1	1		harbor or swamp boom;	11	
2-150.5	6000			6000	40	30-40 x 20lb mud anchors	3	2	2		inchannel mobile skimmers	20	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From Hwy 101 in Petaluma, take Bodega Avenue west. Continue onto Petaluma Valley Road and Hwy 1 and proceed to Bodega Bay. Doran County Park and Bay Flat Road can be accessed from Hwy 1. Site includes the marshes, mudflats, beaches, piers and marinas within the confines of the harbor.

LAND ACCESS: semi-truck, no restrictions

WATER LOGISTICS:
Limitations: depth, obstruction — shallow water outside main channel

Launching, Loading, Docking and Services Available: Boat ramp on the NW shore Doran Spit and Westshore Park. Several docks and marinas for mooring. Fuel and marine hardware available locally

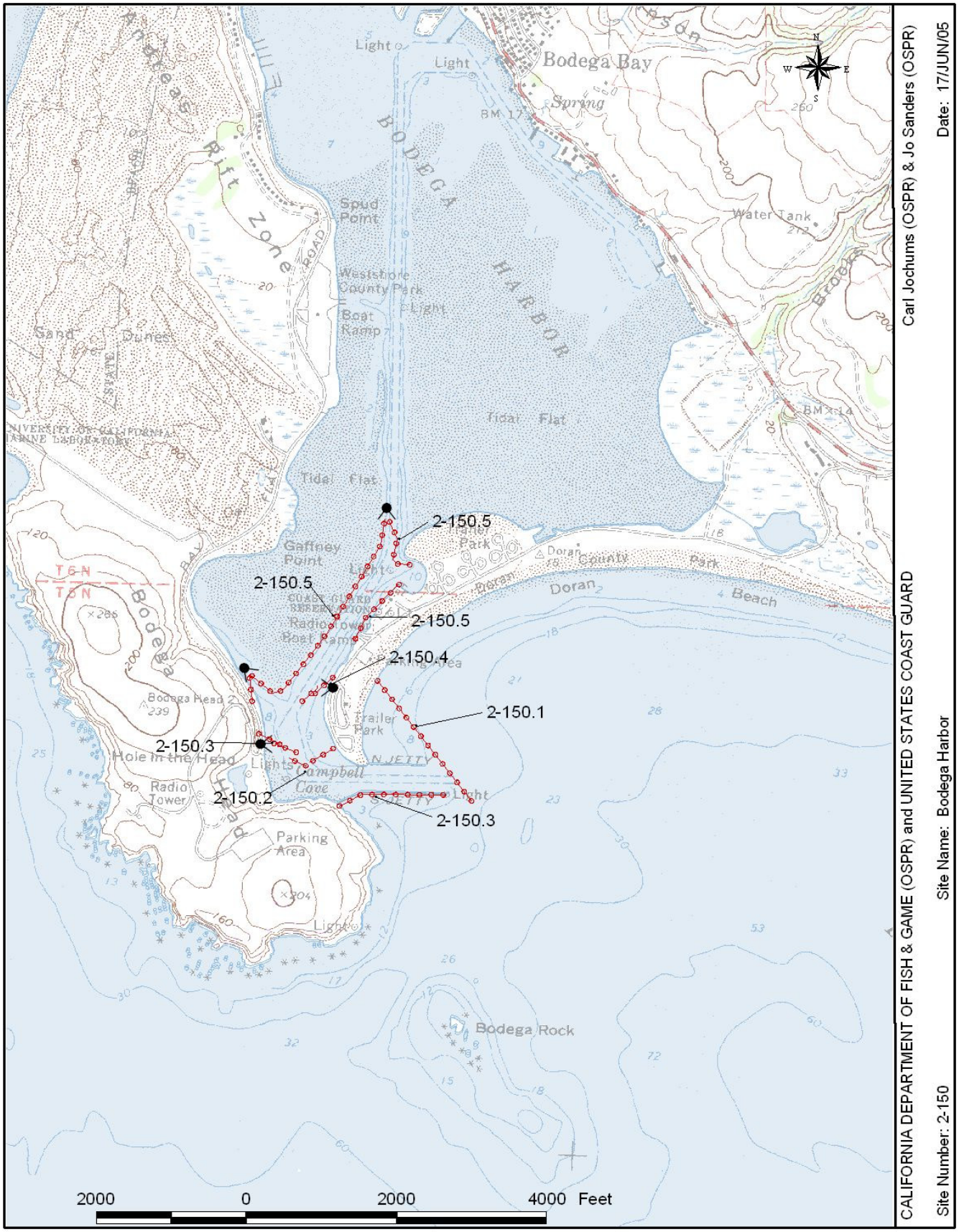
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

There is a good access and a staging area at Doran County Beach and Westshore County Park. The first and third choices for containment and recovery share this access and staging area. Access to Campbell cove containment and recovery sites is from Bay Flat Road on the eastern shore of Bodega Head. A parking lot there could provide a small staging area.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Excellent access to all areas. Major natural and human resources.


Bodega Bay
BODEGA HARBOR
Spud Point
Westshore County Park
Boat Ramp
Tidal Flat
Gaffney Point
Doran County Park
Doran Beach
Trailer Park
Bodega Head
Hole in the Head
Campbell Cove
N JETTY
Parking Area
Radio Tower
Bodega Rock
Water Tank
Sand Dunes
Rift Zone
2-150.5
2-150.5
2-150.5
2-150.4
2-150.1
2-150.3
2-150.2
2-150.3
2000 0 2000 4000 Feet
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Carl Jochums (OSPR) & Jo Sanders (OSPR)
Date: 17/JUN/05
Site Name: Bodega Harbor
Site Number: 2-150
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-152 -C Site Summary- Pinnacle Rocks 2-152 -C

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma**	Sonoma County	3 8 18	123 01
USGS Quad:	**7.5" Quad: Bodega Head, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Large near-shore rock island between Bodega Harbor and the Sonoma-Marin County line. Large near-shore rock island with nesting seabirds.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority "C" site for seabirds nesting on the rock from March through July. Other birds present on the rock all year.

RESOURCES OF PRIMARY CONCERN

Small seabird nesting/roosting area

Small numbers of pigeon guillemots, pelagic cormorants, black oystercatchers, and western gulls

The rocky intertidal zone around the rock is rich and diverse with algae and invertebrates.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Sonoma County Sonoma	Bodega and Tomales Bays 18643	3 8 18	123 01

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil may kill a majority of the algae and invertebrates in the rocky intertidal as well as breeding birds.

HAZARDS and RESTRICTIONS:

Potentially large surf in shallow water around rock. Other submerged rocks.

SITE STRATEGIES

Strategy 2-152.1 **Objective: Prevent oil from contacting the shoreline around the rocks. Avoid disturbing seabirds on the rocks.**

ACP DATE 1/1/1996

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
c) As water conditions permit, deploy deflection boom offshore to protect rocky shore; direct oil toward fine grain sand beaches for collection.

Use large off-shore skimming effort.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-152.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Access by boat from Bodega Harbor. Located between Bodega Harbor and the Sonoma-Marin County line. Large near-shore rock island between Bodega Harbor and the Sonoma-Marin County line.

LAND ACCESS: Boat only from Bodega or Tomales Bay

WATER LOGISTICS: Potential heavy surf and shallow waters.
Limitations: depth, obstruction

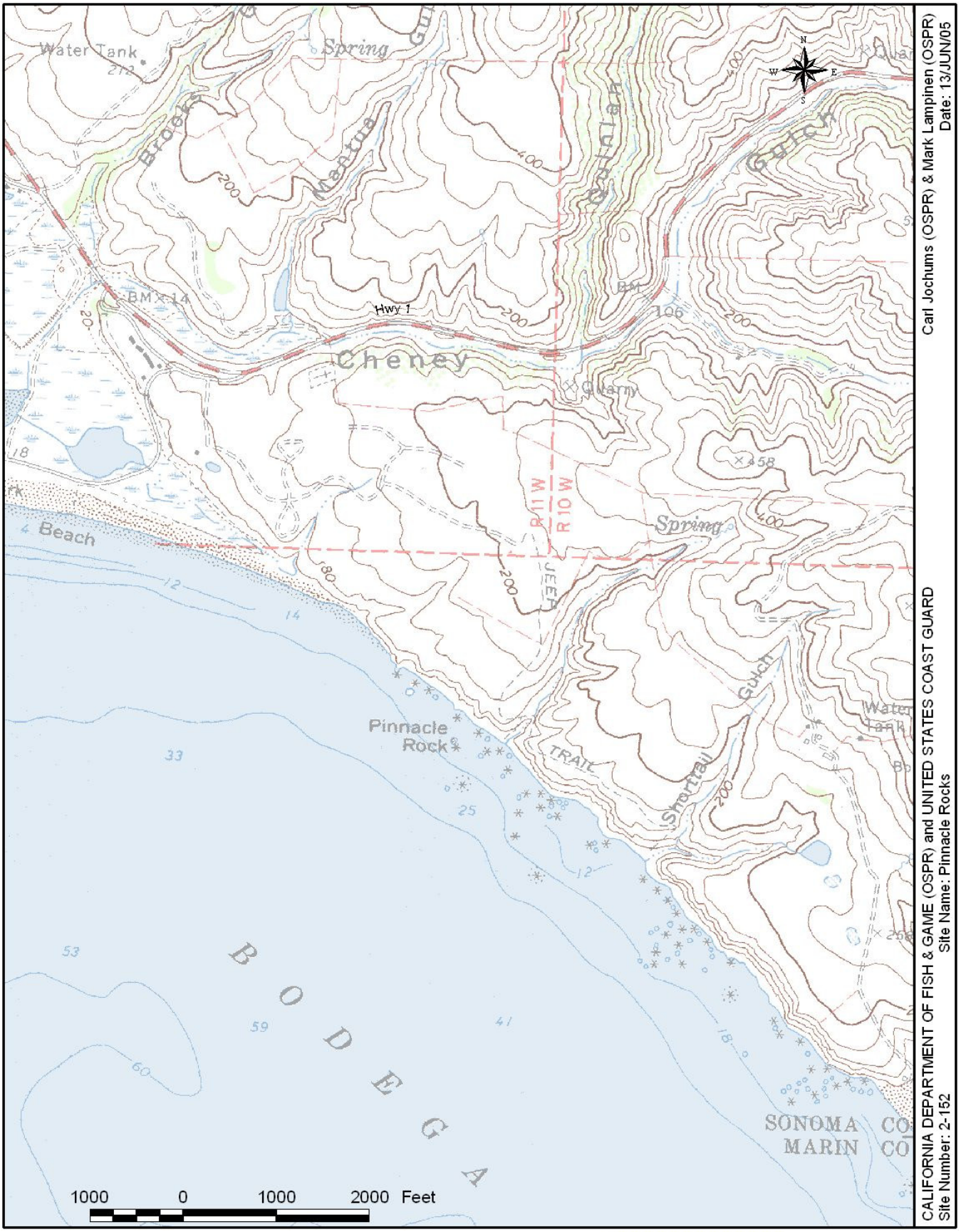
Launching, Loading, Docking and Services Available: Boat ramps in Bodega Bay.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Bodega Harbor will be the staging area for vessels responding to this site.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Sonoma/Marin Counties**	Marin County	3 8 18	123 00
USGS Quad:	**7.5" Quad: Valley Ford, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located within Gulf of the Farallones National Marine Sanctuary on the Marin-Sonoma County line. Site is a large estuary, open to the ocean seasonally. Very strong flood currents are present at the mouth of the Estero. Coarse-grained sand is found on the south spit and southern shoreline. Gravel is on the north bank. The inlet now opens on the north side of the canyon.

SEASONAL and SPECIAL RESOURCE CONCERN

Priority A all year due to use by the snowy plover on the beaches and the presence of wetlands. Migratory shorebirds and waterfowl concentrated at this site during the fall and winter.

RESOURCES OF PRIMARY CONCERN

Saltwater and freshwater marshes are located along both banks and eelgrass beds in shallow areas of saltwater influence.

Western snowy plover, California brown pelican, northern harrier, tidewater goby, and the whistling swan are all threatened, endangered, or species of special concern that occur in the Estero. Migratory shorebirds and waterfowl (dabbling and diving ducks), and sea ducks use this site extensively throughout the year.

River otters may be found in the Estero.

The western pond turtle, a listed species, occurs further up the Estero in the freshwater.

Eelgrass beds are present near the mouth in the saltwater influenced portions of the estuary.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Bodge Farms (Mariculture	Bodge Farms, Mariculture and Fish Farms	(707) 875-2773
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Ed Pozzi		(707) 878-2077
	PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location: Marin County Sonoma/Marin Counties

NOAA CHART: Bodega and Tomales Bays 18643

Latitude N: 3 8 18 Longitude W: 123 00

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow water areas inside the Estero and heavy surf conditions are possible outside the mouth of the Estero.

SITE STRATEGIES

Strategy 2-155.1 Objective: Exclude oil from entering the estuary.

ACP DATE 1/1/1996

In addition to on-water recovery efforts, the following site-specific protection measures should be taken:

Under conditions where the estuary is isolated from the ocean by a sand berm but potential exists for tidal washover into the estuary exists, construct a sediment dike. Sediment should be taken from the beach face south of the river mouth. There may be washover terraces requiring reinforcement at both the north and south sides of the estuary mouth. Each may be 100 meters (300 feet) wide. It is recommended that a shallow ditch be constructed on the backside of the dike (a runnel) near the top to catch any oil that washes over the top of the dike.

Heavy equipment can be safely driven to the beach from road on north shore of Estero or if seas are calm enough use a landing craft to land heavy equipment on beach.

Strategy 2-155.2 Objective: Exclude oil from entering the estuary. Prevent oil from entering seawater intake to aquaculture facility.

ACP DATE 1/1/1996

a) Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard/floatation of 6" and a minimum draft/skirt of 6" may be needed. Consider wind direction, expected current velocity and oil recovery logistics when selecting which shoreline to deflect oil to.

Deploy 500 feet of boom from the north end of the vegetated high berm to a large rock on the north shore of the estuary at the bottom of the road to the water intake for the aquaculture facility, and another 600 feet from the back (east) side of the high berm to a large rock on the north shore of the estuary about 600 feet east of the road. Six skiffs capable of towing boom and setting anchors will be needed to deploy the boom. Two must be left to tend the boom. Use 50ft of Oil Snare, 100ft of sorbent boom to clean up oil that may accumulate. If skimmer is deemed necessary, contact IC prior for possible deployment.

b) Place 200 feet of sorbent boom around the seawater intake for the aquaculture facility.
Keep the manager of the aquaculture facility informed of the location of the oil so he may store seawater in tanks at his facililty and otherwise prepare to shut down his pumps.

Strategy 2-155.3 Objective: Minimize shoreline cleanup and restoration.

ACP DATE 1/1/1996

Place 300 feet of fabric or other material along the north shoreline of the estuary to prevent oil penetration into the sediments and minimize the amount of shoreline cleanup required.

Strategy 2-155.4 Objective: Oil Recovery by skimming

ACP DATE

If oil accumulates in skimmable quantities as a result of strategy .2, deploy skimmers in appropriate area. Contact IC prior to initiation of this strategy.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-155.1	0	0	0	0	0	0	0		0	0		On-water Recovery / ART	10	
2-155.2	1500		50 os	300	10	10 x 20lb.	0	6					20	
2-155.3	0	0	0	0	0	0	0		0	0		300 ft ground cover fabric		
2-155.4	0	0	0	0	0		0	0	2		0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

The best access to this site is through an aquaculture facility on the north shore of the Estero. To get there from Hwy 1, take Estero Lane between Valley Ford and Bodega. The aquaculture facility can be reached via 3.2 miles of unpaved road. It may be desirable to do some improvements to this road before driving large trucks to the aquaculture facility. Located within Gulf of the Farallones National Marine Sanctuary on the Marin-Sonoma County line.

LAND ACCESS: The road is 3.2 miles long, and is unpaved.

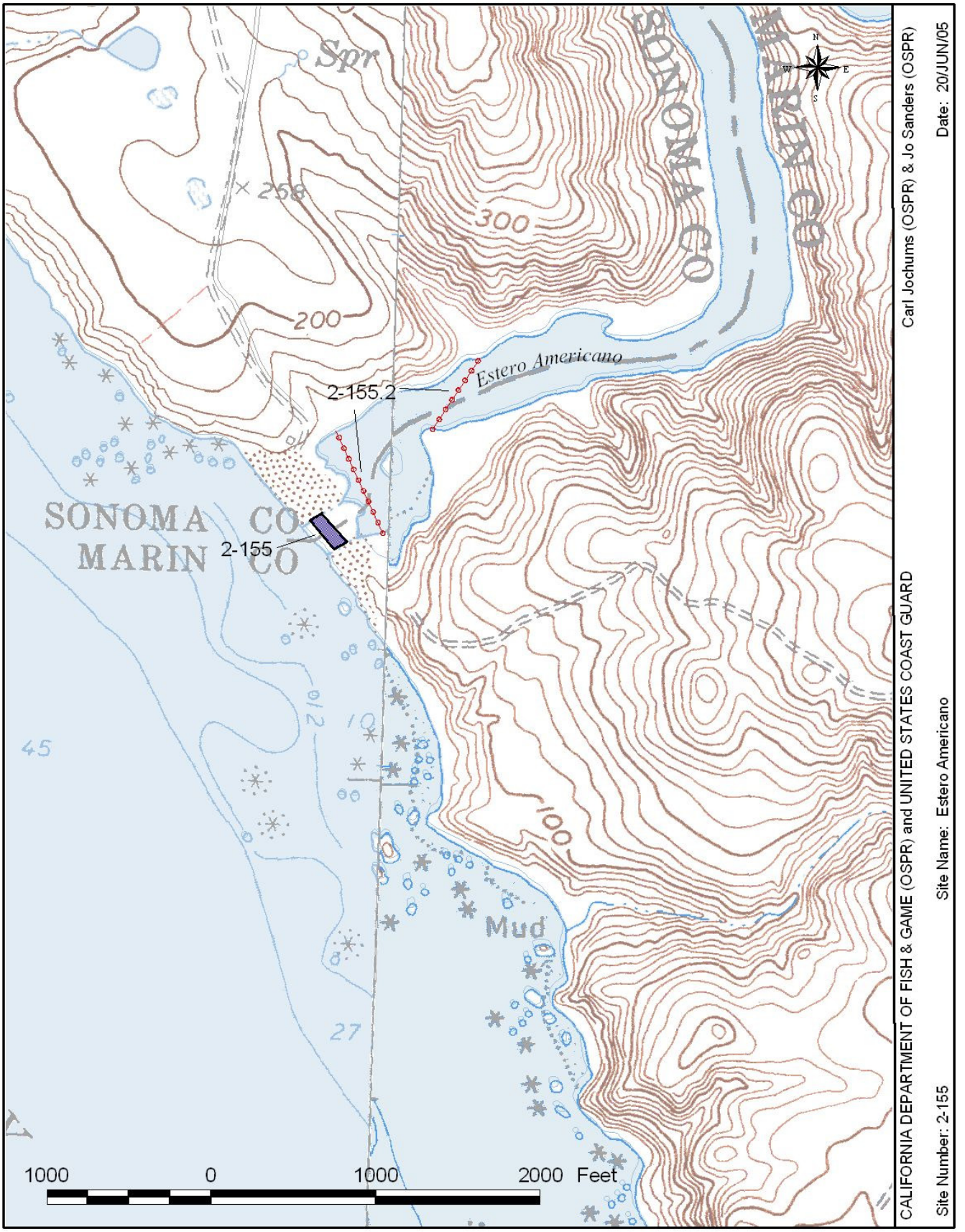
WATER LOGISTICS: Skiffs must be able to tow boom and set anchors in 2 ft.
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Hand launch skiffs across shore on north bank.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Staging area could be established at the aquaculture facility.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:
Sandy shore south of estuary behind spit is alternate containment & recovery site. Not preferred b/c access for support equipment is difficult at best. Preferred site has good shoreline access there for support of oil recovery equipment.



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-158 -A Site Summary- Estero de San Antonio

2-158 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 16	123 59
USGS Quad:	**7.5" Quad: Valley Ford, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located within Gulf of the Farallones National Marine Sanctuary near the Marin-Sonoma County line. Estuary is open to the ocean seasonally. Subject to strong flood currents near the mouth. South spit is wide and sparsely vegetated with a moderately steep coarse-grained beach. The inlet has been deflected to the north side of the canyon. Gravel beaches and cliffs are present along the north bank. Brackish water marshes are present along banks inside estuary.

SEASONAL and SPECIAL RESOURCE CONCERN

A priority all year. Used by several threatened and endangered species throughout the year. Migratory shorebirds and waterfowl (dabbling and diving ducks), and sea ducks use area during fall and winter months.

RESOURCES OF PRIMARY CONCERN

Saltwater and freshwater marshes are located along both banks and eelgrass beds in shallow areas of saltwater influence.

The California brown pelican, western snowy plover, northern harrier, and the tidewater goby are all threatened, endangered, or species of special concern that occur in the Estero. Migratory shorebirds and waterfowl (dabbling and diving ducks), and sea ducks use area during fall and winter months.

River otters may be present.

The western pond turtle, a listed species, occurs further up the Estero in freshwater areas upstream.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Historically, a rich area of human inhabitation. Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 16	123 59

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow water in the estuary and heavy surf along the coastal beach.

SITE STRATEGIES

Strategy 2-158.1 Objective: Exclude oil from entering the estuary.

ACP DATE 1/1/1996

In addition to on-water recovery efforts, the following site-specific protection measures should be taken:

Under conditions where the estuary is isolated from the ocean by a small sand berm but a potential for overwash into the estuary exists, construct a sediment dike. Sediment should be taken from the beach face south of the river mouth. The washover terrace may be 100 meters (300 feet) wide. It is recommended that a ditch be constructed on the backside of the dike (a runnel) near the top to catch any oil that washes over the top of the dike.

Options for getting heavy equipment to the estuary mouth: a) drive to beach from the road on south shore of estero, or b) transport via shallow draft vessel from a ranch up the estuary, or c) using landing craft when seas are calm, land heavy equipment on beach.

Strategy 2-158.2 Objective: Exclude oil from entering the estuary.

ACP DATE 1/1/1996

Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard/floatation of 6" and a minimum draft/skirt of 6" may be needed. Consider wind direction, expected current velocity and oil recovery logistics when selecting which shoreline to deflect oil to. There is a mixed sand and gravel beach on the north shore and a sand beach on the south shore of the estuary.

a) Deploy 1,500 feet of boom from the north end of the high berm on the south side of the estuary mouth to a gravel beach on the north shore of the estuary stranding oil along the north bank. Alternatively, deploy boom from the bluff on the north side of the estuary mouth to the sand beach on the back (east) side of the spit, stranding oil along the south bank.

Two skiffs capable of towing boom & setting anchors will be needed to deploy and tend the boom. It is recommended that a small shallow draft barge be launched at the Pozzi or Fanning ranches up the estero. Such a barge could be towed out to the ranch when the water reaches maximum depth in the fall. The other option is to repair the dirt road leading to the estero mouth from the south. Boom will be necessary when it is expected that seawater may flow into the estuary during the flood tide. Up to 1,500 feet of boom having a minimum freeboard of 6 inches and a minimum draft of 6 inches may be needed. Use 50ft of Oil Snare, 100ft of sorbent boom to recover any oil that may accumulate. If oil accumulates in skimmable quantities, conatct IC prior to skimmer deployment.

b) Place 300 feet of shoreline protection fabric along the shoreline to which the oil is deflected to minimize the amouint of shoreline clean-up required.

Strategy 2-158.3 Objective: Oil Recovery by skimming

ACP DATE

If oil accumulates in skimmable quantities as a result of strategy .2, use of 2 portable skimmers and portable oil storage facilities will be needed to recover the oil as it accumulates. Contact IC prior to deploying skimmers.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-158.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	6	
2-158.2	1500		50 os	100			0	2				12	
2-158.3	0	0	0	0	0		0	0	2	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From Hwy 1 at Valley Ford, take the Valley Ford Franklin School Road southbound. Near Whitacker Bluff Road it will cross the upper end of the Estero. Small boats (skiffs) can be hand launched here. The site is bounded by private property and it

is unknown whether there are farm roads which lead to the Estero mouth. Located within Gulf of the Farallones National Marine Sanctuary near the Marin-Sonoma County line.

LAND ACCESS: Dirt road leads to Estero mouth from the south-needs repair.

WATER LOGISTICS: Sandbar sometimes isolates estuary from sea.
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: The Pozzi and Fanning ranches are up the Estero

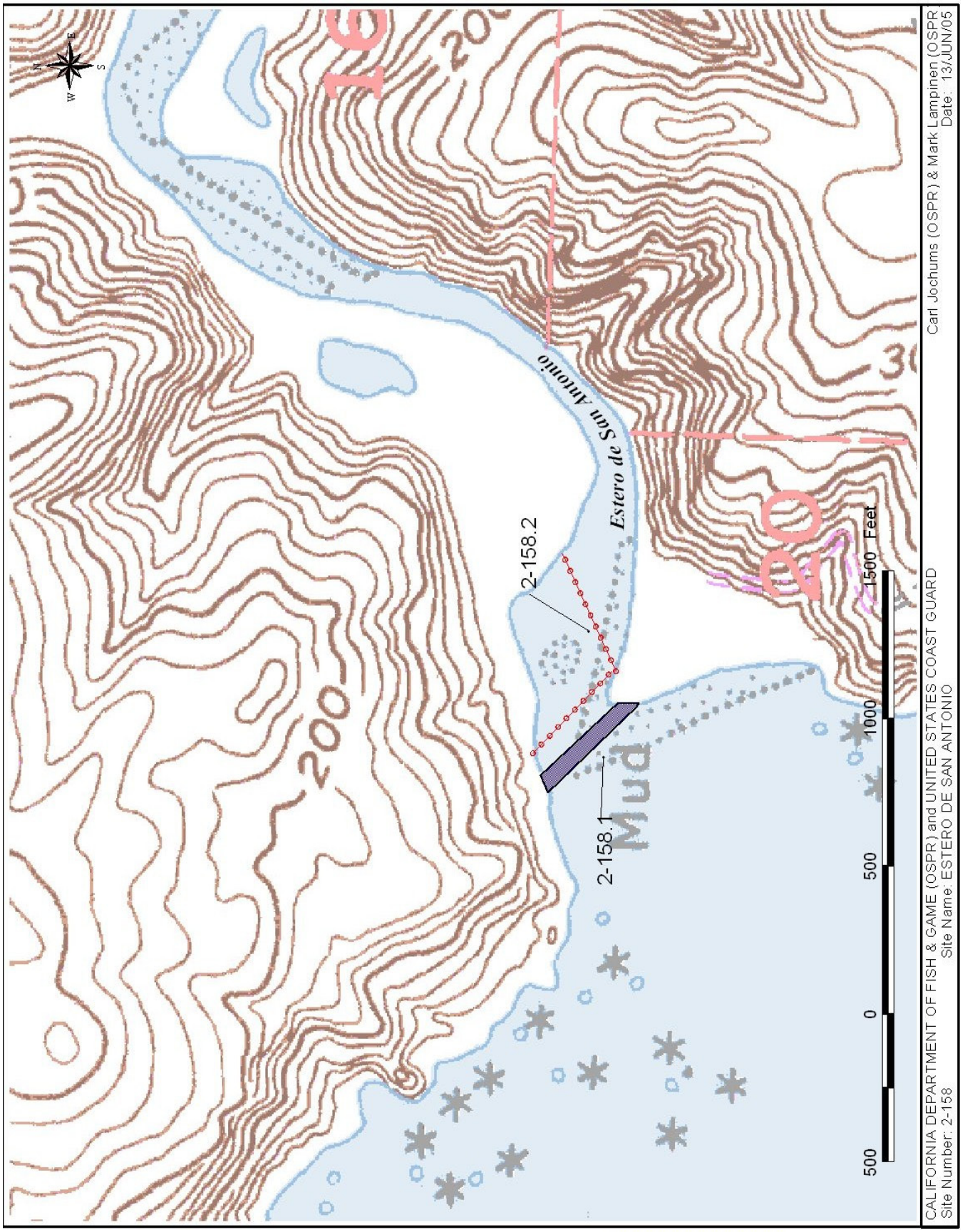
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

The mixed sand and gravel north shoreline just inside the estuary mouth has good shoreline access there for the support of recovery equipment and is the preferred containment site. An alternate site is the sandy shore of the estuary behind the spit but is not preferred because access for support equipment is difficult at best.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Strategy has not been deployed or tested.


Estero de San Antonio
2-158.2
2-158.1
Mud
200
1500 Feet
1000
500
0
500
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Number: 2-158
Site Name: ESTERO DE SAN ANTONIO
Carl Jochums (OSPR) & Mark Lampinen (OSPR
Date: 13/JUN/05
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Dillon Beach Rocks

2-161 -C

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 16	122 59
USGS Quad:	**7.5" Quad: Valley Ford, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located within the Gulf of the Farallones National Marine Sanctuary a few miles north of the entrance to Tomales Bay. The site includes a group of rocky islands to the north and south of Estero de San Antonio. Offshore rock islands of varying size.

SEASONAL and SPECIAL RESOURCE CONCERN

C priority all year. A variety of seabirds use these islands all year as roosting sites. During the early spring and summer months small numbers of seabirds nest on the larger islands.

RESOURCES OF PRIMARY CONCERN

Seabird nesting/roosting area year-round.

Moderate numbers of pelagic cormorants. Small numbers of Brandt's cormorants, pigeon guillemots, black oystercatchers, and western gulls

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 16	122 59

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil on and around these rocks and islands will expose seabirds to oil, excessive surf conditions may splash oil onto roost or nest areas. Oil will also be detrimental to the intertidal and shallow subtidal organisms the occur in the area.

HAZARDS and RESTRICTIONS:

Heavy surf, submerged rocks and wash rock.

SITE STRATEGIES

Strategy 2-161.1 **Objective: Prevent oil from stranding and contaminating bird use areas on the rocky islands.**

ACP DATE 1/1/1996

Because of high wave energy and rocky conditions at this site, mechanical shoreline protection techniques may not be possible. On-water containment and recovery efforts are the best available protection strategy.

a) Pursue feasibilty of alternative response technologies (e.g. dispersants, in-situ burning).

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-161.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Accessible only by water. This site is a collection of near-shore wash rocks and islands north and south of Estero San Antonio in Marin County. Located within the Gulf of the Farallones National Marine Sanctuary a few miles north of the entrance to Tomales Bay. The site includes a group of rocky islands to the north and south of Estero de San Antonio.

LAND ACCESS: boat only

WATER LOGISTICS:
Limitations: depth, obstruction — submerged rocks

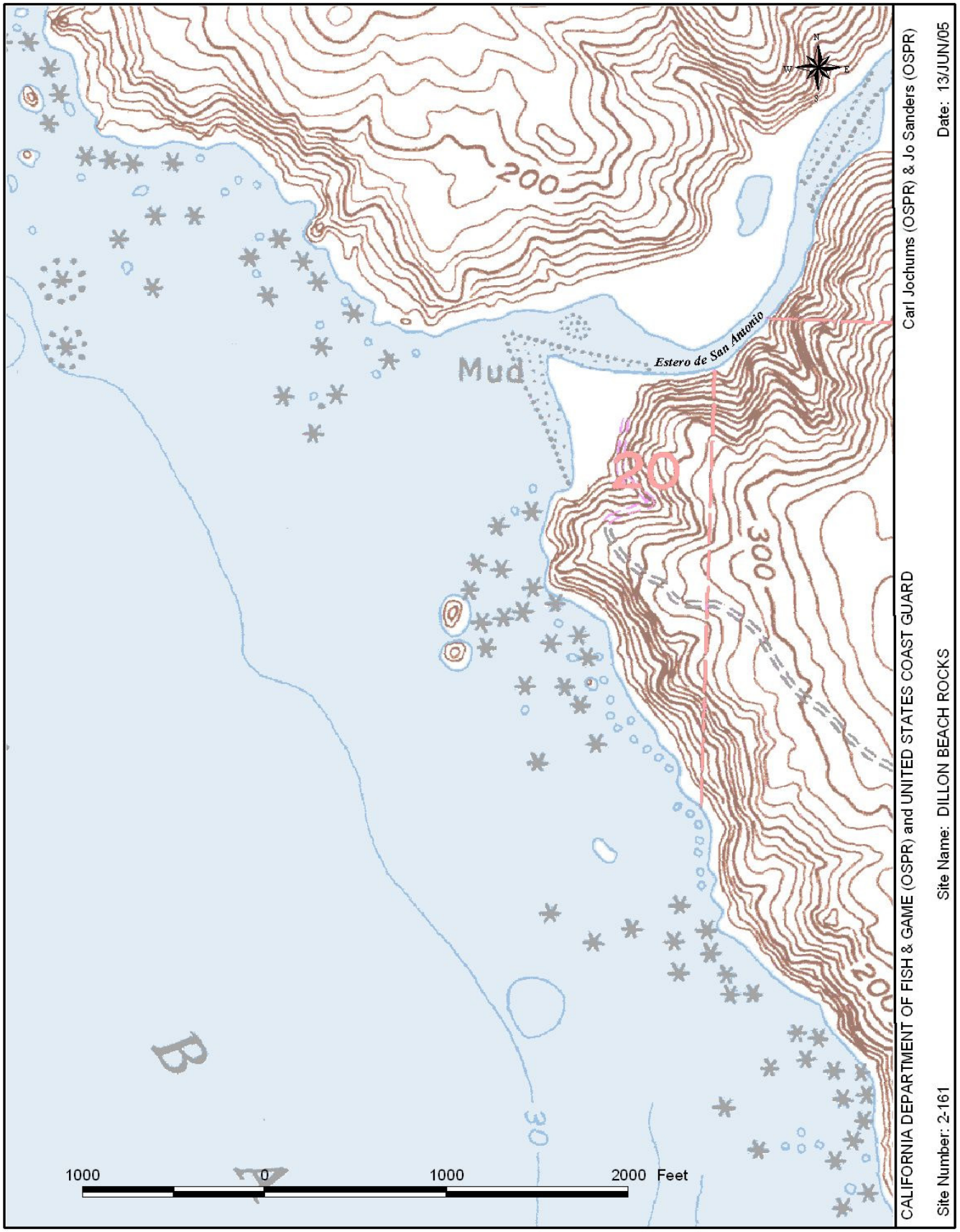
Launching, Loading, Docking and Services Available: Launch in SF, Bodega Bay or Tomales Bay.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Closest facilities in Bodega or Tomales Bays.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 14	122 58
USGS Quad:	**7.5" Quad: Tomales, CA**	NOAA Chart: **Bodega and Tomales Bays 18643**		

Last Page Update : 1/1/2000

SITE DESCRIPTION:

This site includes all of Tomales Bay from the entrance at the north end to the head of the bay at Lagunitas Creek at the southerly head. Several environmentally sensitive sites identified in this ACP (124-134) are also located within this site. This site includes all of Tomales Bay from the entrance at the north end to the head of the bay at Lagunitas Creek at the southerly head. Several environmentally sensitive sites identified in this ACP (124-134) are also located within this site. Tomales bay is a large elongate bay, approximately 13 miles long, with a narrow mouth (1,200 ft wide). There are strong tidal currents through the mouth. Most of the tidal volume scours a deep channel along the west shore all the way south to Pelican Point. Lesser channels braid away from the mouth to the east forming a complex of bars and channels which shift throughout the year and require local expertise to negotiate. Elsewhere waters are shallow and salt marshes, sand and mud flats, extensive eelgrass beds, clam beds, and oyster aqua culture facilities are typical throughout the bay. Significant numbers of migratory shorebirds, seabirds, and waterfowl (dabbling, diving, and sea ducks) use the area particularly during fall and winter months. Pacific herring spawn in eelgrass beds. Anadromous fishes are present in the bay and its tributaries from November through May. Ownership of the bay margin is predominantly public agencies and conservation groups: Point Reyes National Seashore, Golden Gate National Recreation Area, Tomales Bay State Park, Audubon Society. Many private landowners bordering the bay are concerned about the conservation and well being of the bay. All response actions should be temporized by the fact that the entire margin of the bay, especially drainage mouths, have archeologic sites from heavy native American use.

SEASONAL and SPECIAL RESOURCE CONCERN

The year-round "A" priority is due to extensive marsh habitat and several threatened and endangered species inhabit the bay all year. There are seasonal issues: herring spawn on eelgrass November through March, endangered coho and other salmonid spawning and migration, and migratory influxes of shorebirds.

RESOURCES OF PRIMARY CONCERN

The entire bay contains a variety of environmental sensitivities including: salt marshes, eelgrass beds, clam beds, anadromous fish streams, and expansive mudflats which provide foraging habitat to 10's of 1000's of shorebirds and waterfowl that migrate through the bay every spring and fall, as well as reside in the bay.

Threatened and/or endangered species utilizing the bay include the western snowy plover, California brown pelican, marbled murrelet, bald eagle, osprey, northern harrier, saltmarsh common yellowthroat, and black rail. Significant numbers (>25,000 birds) of migratory shorebirds, wading birds, waterfowl (dabbling, diving and sea ducks) use bay during fall and winter months.

Approximately 500 harbor seals haul out and pup at specific locales.

Anadromous fishes (Coho salmon and steelhead) use Walker and Lagunitas Creeks. Clam beds and fish resources are present throughout bay at all times of the year. Pacific herring spawn in eelgrass beds throughout Tomales Bay (particularly in the northern portion) from November - March.

A variety of shrimp, worms, clams and other invertebrates are present on the mudflats. Near the bay mouth, two sand bars (islands) are present which support large populations of harvestable clams and a heavy, sustainable sport clam fishery. There are a number of commercial oyster culture operations in the bay.

Tomales Bay is rich in eelgrass beds throughout the upper 2/3 of the bay. Several saltmarshes containing threatened and/or endangered plant species occur near Lawson's Landing, Walker Creek, White Gulch, Miller Point, Inverness, and Lagunitas Creek.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

There are over 200 known cultural sites on the Bay margin. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
E, B, T	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Audubon	Audubon Canyon Ranch	(415) 868-9244
B, T, E	DPR Dispatch	US National Park Service, Golden Gate (NRA)	(415) 561-4620
E, L, O	John Finger	Hog Island Oyster Co	(415) 663-9218
C	Leigh Jordan	Northwest Historical Resources Information Center	(707) 664-0880

E, B	John Kelly	Audubon Canyon Ranch	(415) 663-8203
E, L, O	Lawson's Landing Store &	Lawson's Landing Store & Campground	(707) 878-2443
B, T	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
B, T, O	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 14	122 58

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil may contaminant a wide variety of resources in the bay including saltmarshes, eelgrass beds, clam beds, harbor seals, birds and oyster aquaculture facilities. Shallow waters and large tidal mudflats will create access difficulties. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Extremely strong tidal currents near the mouth of the bay. Shallow tidal bars and flats exist throughout the bay especially in the northeastern portion at the mouth of the bay. Submerged oyster aquaculture facility structures common on the eastern side of the central bay.

SITE STRATEGIES

Extreme currents, narrow channels, and extreme shallows are deployment obstacles in many parts of Tomales bay which can best be overcome with the aid of local knowledge. Local contacts include: John Finger - Hog Island Oyster Company, Gene Maffuci - local fisherman, and alternates: Carlos Porrata - State Park Ranger, Steve Stinnett - National Park Ranger, Tom Moore - DFG biologist, and other local oystermen.

Strategy 2-164.1 **Objective: Primary exclusion for heavy oil impact threats: Exclude/divert/contain oil near mouth of bay to collection near Pelican Pt and minimize free spreading of oil on high velocity currents.** ACP DATE

The concept is to keep oil from spreading and allowing currents to move it to an area near Pelican Pt where currents cease to be a serious factor and collection is realatively easy. On the ebb current this strategy will also direct oil to shoreline collection at Tom's Pt area. This technique requires the direction of local fishermen (see contacts below), because dealing with channels and shallow bottoms along and south of Tom's Pt require detailed local knowledge and very shallow draft vessels, as does the approach to Tom's Pt shoreline.

Deploy 15,000 ft of Hboom from about a point about 1000 ft north of Toms Pt at a diagonal into the channel and then centered in the current all the way past Hog Island to collection at Pelican Pt. A second deflection from shore should preceed the main deflection. The oil will stay within the current and move to collection areas, and not spread across the bay. Currents thought out upper bay are very strong and booms must be set with and not against current using large anchors (22# and 40# danforths with chain) else currents will entrain oil under booms. Set anchors every 500 feet and more often to angle boom into the current at Tom's Pt shoreline and Pelican Pt shoreline (and other places where channel turns). Cascade boom where necessary. If boom is set with or very diagonal to the current, then oil will not entrain under the boom. Target time for completion for six boomboats working at both ends of the strategy is about 3.5 hrs.

Collection should be set up just before or just after Pelican Pt by bringing boom end to shoreline. Even though Pelican Pt is a sensitive site (2-174), it is one of the few locations where oil may be managed and controlled and where land-based or water-based collection can be successful. The deepest water is just after Pelican Pt. Use Self Propelled Skimmers (SPS) with storage barges to collect, decant, and transport oil to storage at the east shoreline. A secondary collection area may be established at the mouth of White Gulch (see substrategy 2-177.3).

Strategy 2-164.2 **Objective: Collect/Divert/Exclude - 2ndary backup strategyfor threats of heavy oiling to exclude oil from spreading to upper Bay and divert to east shoreline collection.** ACP DATE

Deploy boom at a diagional from just south of Pelican Pt to the shoreline about midway between Cypress Grove and Nick's Cove (note that there is a dairy on the hill above and a culvert under Hwy 1 at this location.) Currents are minimal along the entire length of this boom deployment; 7000 ft of 4X4+ boom (or 9X9+ or better if winds are threatening). Place anchors at 800 ft intervals. Construct a collection Boom pocket at the shoreline and service Shore Side Skimming (SSS) at Hwy 1. Target time for deployment is 3.5 hrs using 3 Boomboats.

Strategy 2-164.3 **Objective: Deflect to alternative collection locale at White Gulch.** ACP DATE

As a back-up collection area, divert oil from the containment boom in substrategy .1 past marker ## near Hog Isl to White Gulch. Deploy 2000' 9X9+ Hboom across the channel into White Gulch, cascading as necessary, with anchors at least every 400' intervals. The back portion of White Gulch cove has little current and oil may be skimmed with Self Propelled Skimmers (SPS). If oil is to be collected here, the protection strategy fo White Gulch (2-174.1) will require alteration by adding more boom and anchors (300' 4X4+) to create a collection pocket. Deployment Target time is 3 hrs using 2 BoomBoat equivolents.

This location has possible physical conditions which may limit it's usefulness. 1) it may be difficult to divert surface currents across the channel past the shallow mid-channel eelgrass bed to the Cove, because of the current deflected off the upstream point toward the east; 2) there are stiff winds which typically blow down White Gulch which might prevent oil from staying in the collection pocket. These uncertainties cause this alternative to be viewed as an alternate until it can be demonstrated as effective.

Strategy 2-164.4 **Objective: 3rd alternate: Divert oil from Sand Point area across to Tomales Headland** ACP DATE

Deploy 6000' diversion boom from a locale near Sand Point (and in conjunction with Sand Pt Strategy 2-166.1) across the channel at a very gradual diagonal (to keep the flow agianst the boom to a minimum to avoid entrainment) to quiet waters near shore. Cascade boom as necessary and adjust cascades to avoid entrainment losses. Use mid-boom anchors to minimize catenary sags in boom. Use heavy anchoring with chain and extra scope on lines. For a target time of 2 hours, 5 BoomBoat Equivalents will need to be assigned. If oil collects effectively, call for Self Propelled Skimmer and seek opportunities to gound oil on pocket beaches along the shoreline.

This strategy is the third alternate to control oil entering Tomales Bay for these reasons: 1) currents here are extremely strong (can exceed 4 knots) and requires exceptional booming skills; 2) there are no clear collection options at the shoreline; 3) very high tides may carry oil into riparian vegetation along shore.

Strategy 2-164.5 **Objective: Outside bay alternative: ART & Open Water Skimming.** ACP DATE

Eliminating oil before it enters the Bay is the optimal strategy for dealing with oil spill threats.

Only the application of Advanced Technologies (dispersants & in situ burning) has a high effectiveness in large slicks. Conventional skimming can be effective if oil encounter rate is high.

Under rare calm conditions oil might be diverted to shore outside the bay, but these deployments are not likely to be effective and will fail when conditions become aggressive.

Grounding of oil at Sand Pt outside the bay entrance is similarly problematic: Deflect oil to Dillon Beach by cascading small sections (300 to 500 feet) of ocean boom across the flood tidal channel that runs parallel to the beach. Use 4,000 feet of boom having a minimum freeboard of 20 inches and a minimum draft of 18 inches. Two boom boats capable of operating in 3 ft seas will be needed to pull the boom off the shore into formation.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-164.1	15000	0		0	40	25/22# & 15/40#/danforth =20' chain	6	1	1	SPS		shallow draft vessels / stakes for shallow	20	2
2-164.2	7000			0	10	22#/danforths	3	0	1	SSS			9	2
2-164.3	3500	300		0	16	11/22# & 5/40#/Danforth + chain	2	0	1	SPS			6	
2-164.4	6000	0		0	0		5	0	0			local expertise	15	
2-164.5	0	0		0	0		0	0	0					

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or the Petaluma-Bodega Rd to Tomales-Petaluma Road to Hwy 1. This site includes all of Tomales Bay from the entrance at the north end to the head of the bay at Lagunitas Creek at the southerly head. Several environmentally sensitive sites identified in this ACP (124-134) are also located within this site.

LAND ACCESS: varies from foot only to large truck

WATER LOGISTICS: YES, <40ft vessels preferred, shallow draft only over flats

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Boats up to 35 feet LOA can be launched (hoist) at Marshall Boat Works (Owner: John Vilisitch (415-663-122x). There is a concrete boat launch ramp at Nick's Cove near Miller Park. There are also beach launching for small boats (<25ft.) at Lawson's Landing, Sacramento Landing, and Marconi. Also inverness.

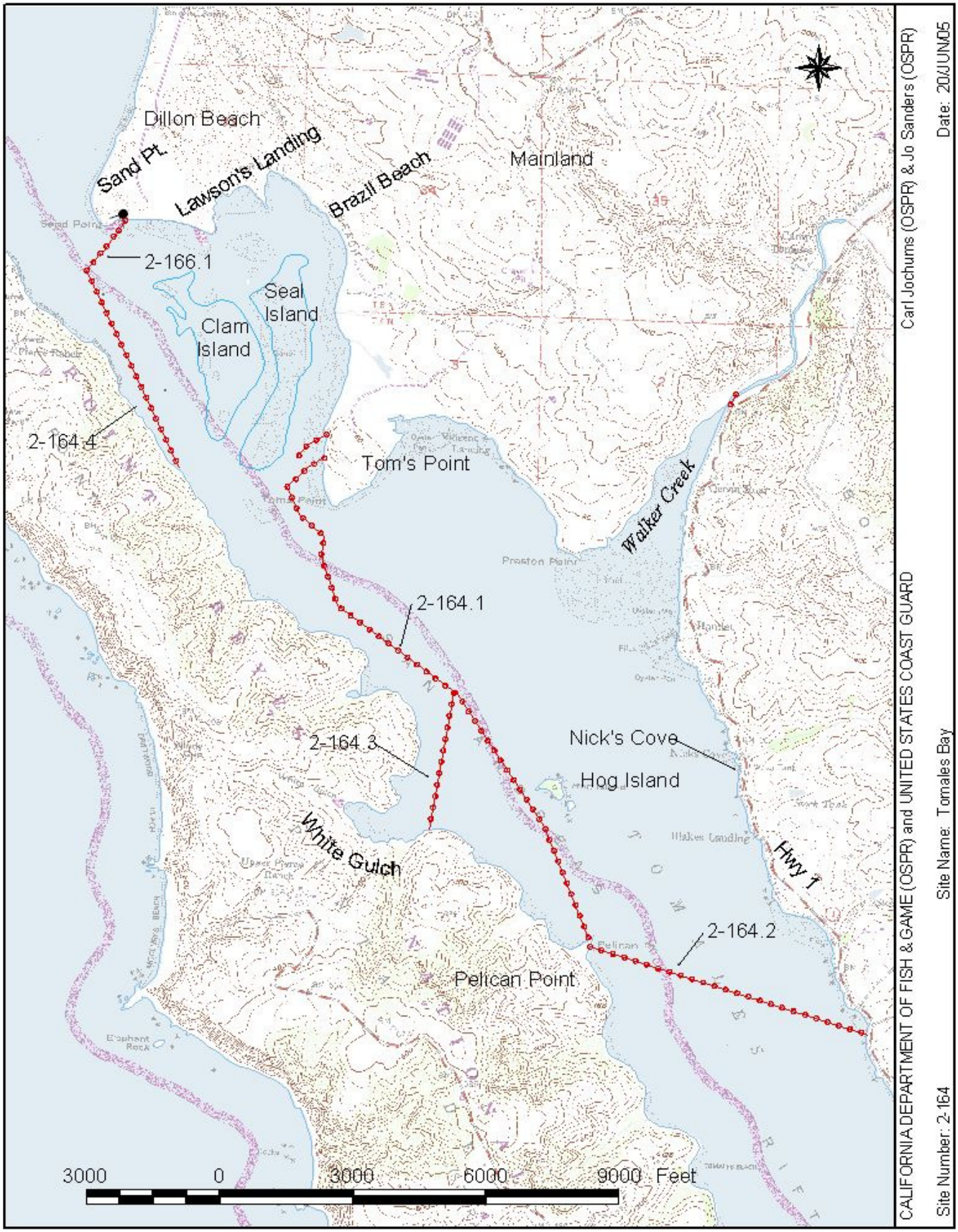
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

There is good access and large staging area at Lawson's Landing. There is also space for a staging area at Marshall Boat Works and Nick's Cove boat ramp.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Access to SE end of Brazil Beach is through private property owned by Mr. Jim Byers. Get phone # from County Sheriff or Audubon Canyon Ranch.



Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 14	122 58

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil at this site may be detrimental to the wetlands, clams beds, eelgrass beds, marine mammals and waterfowl that use this site. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Extremely strong tidal currents near the mouth of the bay. Shallow tidal bars and flats exist throughout the bay. Submerged oyster aquaculture facility structures common on the eastern side of the central bay.

SITE STRATEGIES

A portion of flood current into the bay cuts past Sand Point toward Lawson's Landing and Brazil Beach. The channel is near shore and the current is swift. Some of these waters are extremely shallow, currents are very swift, channels are narrow: booming should be undertaken with the assistance of local oystermen who are familiar with this area (John Finger - Hog Island Oyster Company (415) 663-9218 or Gene Maffucci (415) 663-1639.)

Strategy 2-166.1 **Objective: exclusion/deflection/collection: when severe oil impacts are threatening, exclude oil entry by deflection to shoreside beach collection at Lawson's Landing.** ACP DATE 1/1/2000

Cascade three 500 foot sections of curtain (harbor) boom in the channel south of Lawson's Landing to deflect oil north away from Clam Island (just off shore) and onto the sand beach at Lawson's Landing east of Sand Point. The boom must be deployed at sharp angles to the swift along-shore current to avoid entrainment of oil under booms. One boom boat and a skiff are needed to deploy the boom. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may have accumulated, and a collection site may need to be excavated on the sand beaches at Lawson's Landing. (This strategy is to be joined to the primary exclusion/collection strategy for Tomales Bay 164.2 .) Consult IC if oil begins to occur in skimmable quantities.

Strategy 2-166.2 **Objective: Diversion to shore / Collection at eastern Brazil Beach when severe oil impacts are threatening.** ACP DATE 1/1/2000

Oil may be deflected to Brazil Beach by cascading several sections of boom from the north end of Seal Island to the southeast end of Brazil Beach. Up to 2,000 feet of 8X8+ curtain boom and heavy anchors are needed to accomplish this task. One shallow draft boom boat and a skiff will be needed to deploy and anchor the boom. Use 50ft of Oil Snare (OS) and/or 100ft of sorbent boom to collect oil that may have accumulated and Consult IC if oil begins to occur in skimmable quantities. This strategy may be reversed if oil is to be collected on the ebb. There is a lot of ebb current causing this area to be a natural collection site.

Strategy 2-166.3 **Objective: Collection and Skimming for 2-166.1 and 2-166.2 boom deployments if significant quantities of oil can be accumulated.** ACP DATE

Use skimmer to collect oil if it accumulates in skimmable quantities as a result of strategies 2-166.1 and 2-166.2. A shore side skimmer and a portable storage device can located at Lawson's Landing (2-166.1) or at east side of Brazil Beach. Good access at both locations. Permission of owners (particularly at 2-166.2) is important (See DFG for private owner contacts for entry and using shoreside roads and ramp).

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-166.1	1500		50 OS	100	8	22+#/danforth + 10 1" chain	1	1					5	
2-166.2	2000		50 OS	100	10	22+#/danforth + 10' chain & stakes	1	1	1	SSS		Shallow draft boom boat	5	
2-166.3	0	0	0	0	0		0	0	2	SSS	0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or take the Tomales Petaluma Road to the mouth of the bay. Site includes shoreline and tidal areas east of the mouth of Tomales Bay from Sand Point to Vincent Landing, which is east of Tom's Point. Also included in the site are the extensive mudflat islands between Sand Point and Tom's Point: Clam Island and Seal Island.

LAND ACCESS: Access through private land

WATER LOGISTICS: Very shallow water, shallow draft boats only

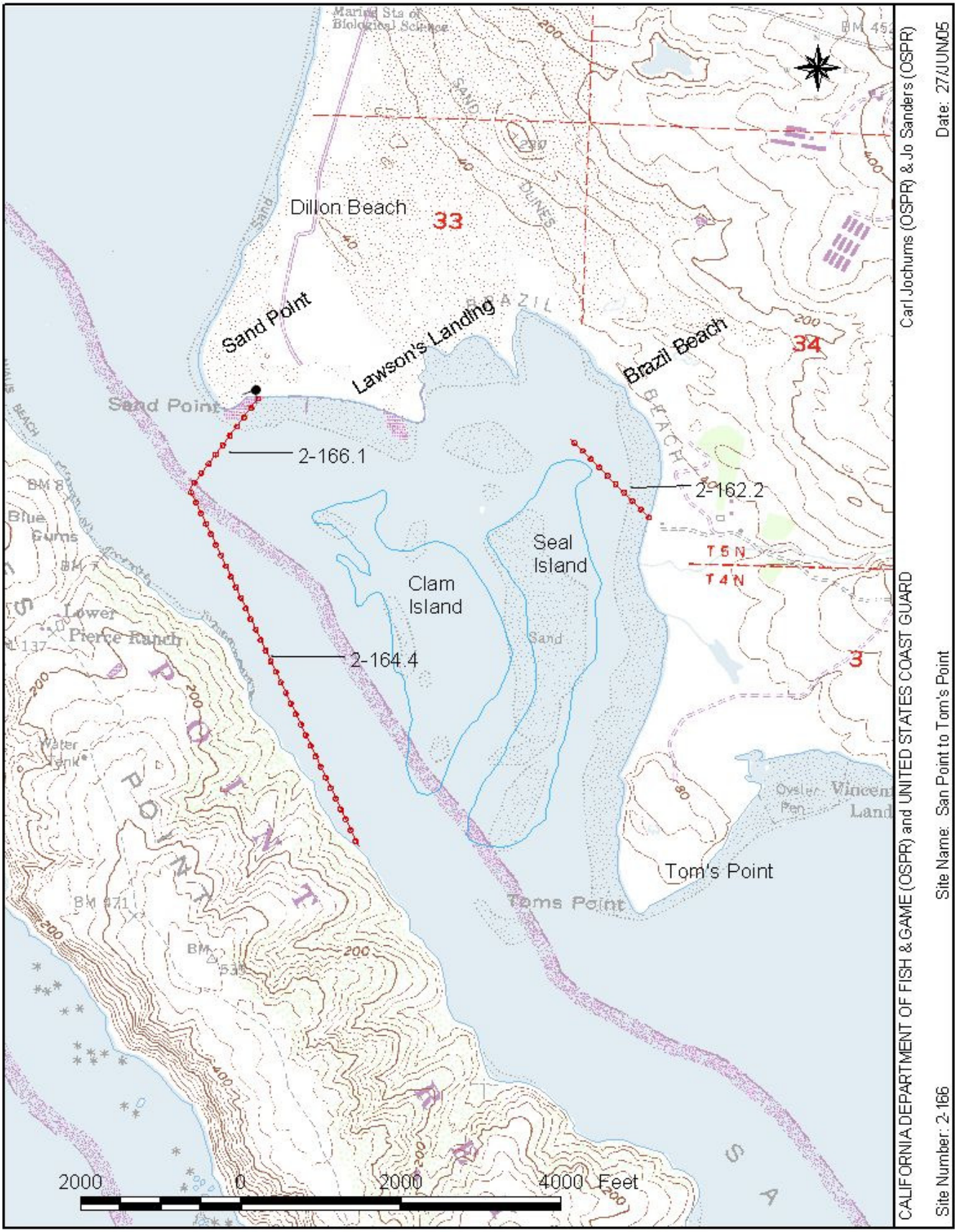
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Can launch boats at Lawson's Landing and Nick's Cove.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Staging and facilities at Lawson's Landing. Staging at Nick's Cove.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:
No Strategy was listed.



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 13	122 56
USGS Quad:	**7.5" Quad: Tomales, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes the Walker Creek delta wetlands and tidal flats between Preston Point on the north and the unnamed point on the south and the creek upstream to the limit of tidal influence. Walker creek has a seasonal fresh flow which can be considerable during rainy seasons, but during much of the year, the tidal flow is dominant or exclusive. There is an extensive saltmarsh at the Walker Creek mouth and saltmarsh along the shores of the estuary. There are several channels leading into the estuary. There is a small pocket marsh on the south shore which is fed by a separate drainage. Shallow mudflats and and oyster leases front the marsh. These waters are barely navigable but only by the knowledgeable oystermen and other locals.

SEASONAL and SPECIAL RESOURCE CONCERN

The Walker Creek delta is an "A" priority all year because of wetlands. Seasonal concerns include endangered coho salmon and steelhead trout spawn in the winter and smolt out-migration follows in spring-early summer. American white pelican frequent here June-March. The marsh is heavily used by migratory shorebirds in the fall and winter.

RESOURCES OF PRIMARY CONCERN

Mudflats and eelgrass beds are found in the Walker Creek delta to Preston Point. Saltmarsh can be found along the shore and in the Walker Creek estuary.

Several bird species of special concern are resident or casual visitors. The Federal Listed species brown pelican (T) are found here occasionally or seasonally; California threatened species such as the California black rail, salt marsh yellowthroat, and merlin typically are present in the marshes. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant, are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr) and many are resident throughout the year.

River otters and harbor seals are not uncommon in the river. When the tides are high, seals tend to spend time near the oyster beds, presumably foraging for fish.

Coho salmon and steelhead migrate upstream from October through April. Smolts out-migrate from February to June. Pacific herring spawn in eelgrass beds throughout Tomales Bay, particularly in the northern portion. Oyster mariculture leases here.

Eelgrass beds are present in the outer river delta area. Extensive saltmarsh flora are present along the river banks of the delta transitioning into freshwater plants further upstream.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Bill Cox	CA Dept. of Fish & Game	(707) 823-1001
	Jules Evens		(415) 663-1148
E L	John Finger	Hog Island Oyster Co	(415) 663-9218
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Dispatch GGNRA	US National Park Service, Golden Gate (NRA)	(415) 561-5505
B E L	John Kelly	Audubon Canyon Ranch	(415) 663-8203
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
E L	Carlos Porrata	CA State Parks, Tomales Bay (SP)	(415) 669-1140
E L	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 13	122 56

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Great potential for injury to wetland plants, eelgrass beds, waterfowl and shorebirds. Oil may penetrate into side channels of the marsh and upstream as far as tidal waters may extend. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow water area. Aquaculture facilities offshore of the delta.

SITE STRATEGIES

These waters are extremely shallow and booming should be undertaken with the assistance of local oystermen who are familiar with this area (John Finger - Hog Island Oyster Company (415) 663-9218.) Only very shallow draft skiffs and boom boats can operate effectively in this area. Use anchors and stakes to secure the boom.

Strategy 2-168.1 **Objective: Minimal Exclusion effort: Boom each channel mouth of the delta. This can be executed with minimal staff and small boats. It leaves the marshfront exposed.** ACP DATE

a) Using small craft or oyster boats, boom the two entrances to Walker Creek delta and estuary. The southern opening should be boomed with about 350' of 4X4"+ skirted boom in a chevron configuration from the shoreline just north of Hamlet (yet before the pocket marsh along Hwy 1) and the delta bay front. The northerly opening requires 300' of 4X4"+ boom in a chevron configuration.
b) Boom small pocket marsh Northeast of Tom's Point with 300 ft swamp boom (4X4+)

Strategy 2-168.2 **Objective: protective booming of Walker Creek Delta marsh front as augment to channel exclusions (2-168.1)** ACP DATE

Deploy 1500 ft swamp boom (4x4+) across delta front and link to channel exclusions of (2-168.1). Extreme shallows will require operations with very shallow draft vessels and at high tide. Employ local oystermen if possible to make execution or for advise.

Strategy 2-168.3 **Objective: 2nd layer of exclusion: boom entire marsh front including the various channels. This strategy excludes oil from all channels into the delta and the exposed marshfront as well.** ACP DATE

Using shallow draft vessels such as oyster boats, deploy 2500' of 4X4"+ skirted boom from Preston Point to Hamlet. Anchor the boom at 800' intervals and form chevrons in the channels to avoid oil entrainment under the boom. Back channels with sorbent.

Strategy 2-168.4 **Objective: 3rd exclusion: When heavy oil threat is pending, deploy large boom set from Tom's Pt to north of Nick's Cove to exclude oil and redirect oil to Tom's Pt on ebb for collection.** ACP DATE

Use when heavy oil impacts to Tomales Bay are pending and the primary exclusion/collection strategy for the Bay may not be effective and oil may spread into the east side of the bay.

Deploy 9,000 feet of 6X6 or larger boom from south of Hamlet to Tom's Point. At the channel immediately south of Tom's Point, the boom must be angled across the current to keep oil from entraining under the boom on the flood tide. These waters are extremely shallow. Anchor at about 600' intervals. The target time for deployment is about 4 hours using three boomboat equivalents.

Strategy 2-168.5 **Objective: Upstream confinement for product spillage from Hwy 1 or upstream. Deploy boom across the lagoon near Hwy to contain and confine spill to upper estuary and prevent product from flowing down into delta.** ACP DATE 10/1/2005

Deploy boom across the lagoon to contain and confine spill to upper estuary and brining it to a collection point near Hwy 1 (taking into consideration inhalation and flamability safety). Select a site where containment can be assured and deploy 200 ft of small boom across at a diagonal. Select a site based on pevailing conditions: 1) far enough away from product that safety compromised; 2) access for deployment; 3) only secondarily consider collection - because collection may not be advisable if the product is highly flamible. Repeat the booming to provide several layers of containment. Keep some slack near shore to assure containment even when boom drops during low tide. (strategy not shown on Site Strategy Diagram).

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Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-168.1	0	950		0	12	2 anchors and 10 stakes	0	1	0			shallow draft skiff	2	
2-168.2	0	1500	0	0	10	Stakes	0	2	0		0		4	
2-168.3	0	2500		600	8	anchors and stakes	0	2	0			skiffs must be shallow draft	4	
2-168.4	9000	0		0	20	22#/danforth + chain	3	1	0			shallow draft boomboats	11	
2-168.5	0	400		0	0		0	1	0			stakes or small anchors	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Highway 1 follows the eastern shoreline of Tomales Bay. To get to Hwy 1 from Hwy 101: in San Rafael, take the Sir Francis Drake exit and proceed west to Olema and Pt. Reyes Station; in Petaluma, take the Pt. Reyes Petaluma Road to Pt. Reyes Station at the head of the bay, or take the Tomales Petaluma Road to the mouth of the bay. Hwy 1 parallels the site near the intersection with Tomales Petaluma Road. Site includes the Walker Creek delta wetlands and tidal flats between Preston Point on the north and the unnamed point on the south and the creek upstream to the limit of tidal influence.

LAND ACCESS: Shallow draft vessel only, some land access upstream

WATER LOGISTICS: shallow draft only

Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Launch and Lawson's Landing or Nicks Cove.

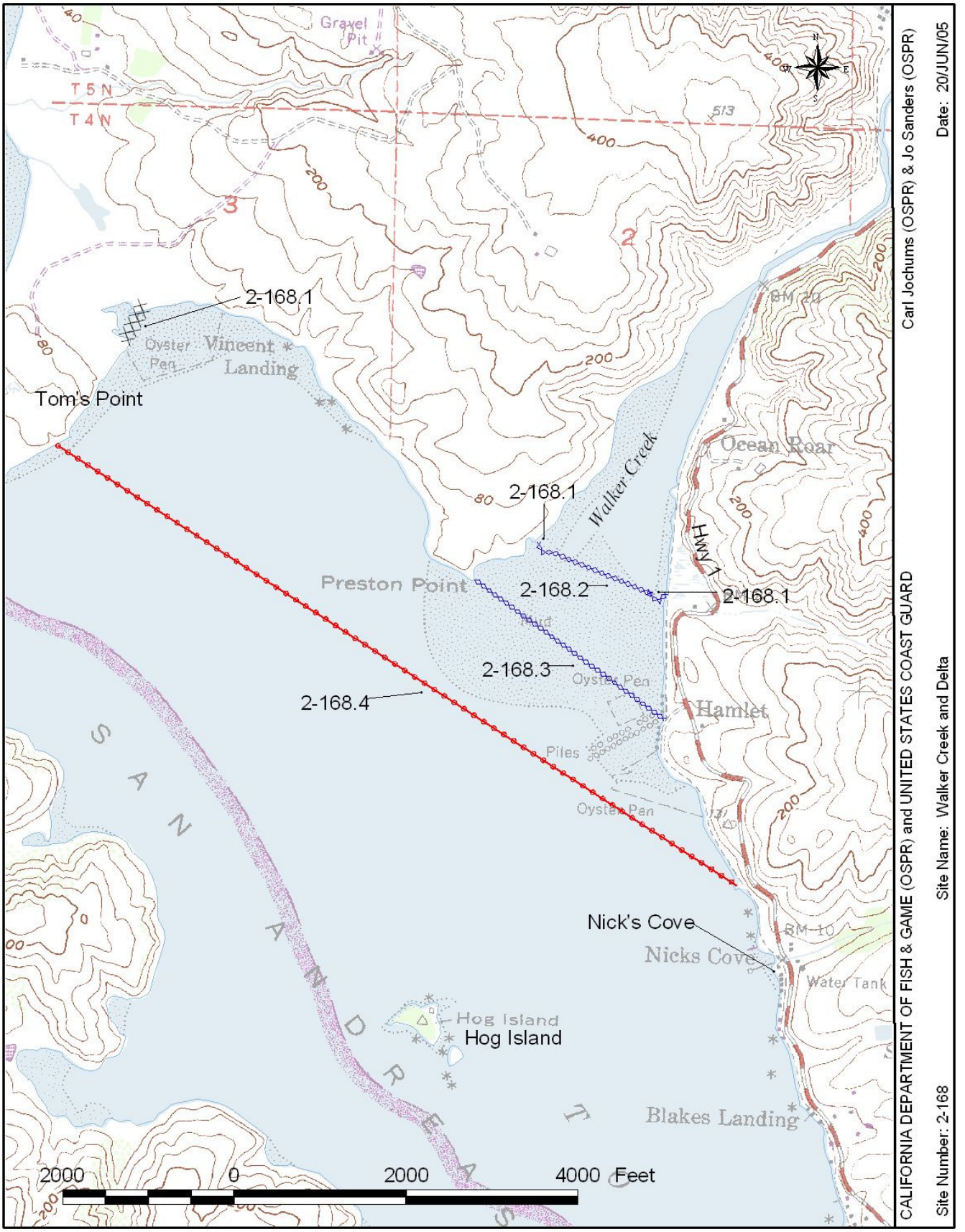
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging upstream at parking area off Hwy 1, Lawson's Landing or Nicks Cove. Facilities at Lawson's Landing and Marshall.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

No strategy on file.


Gravel Pit
T 5 N
T 4 N
513
400
200
3
2
2-168.1
Oyster Pen
Vincent Landing
Tom's Point
80
BM 20
Ocean Roar
Walker Creek
2-168.1
2-168.2
2-168.1
HWY 1
Preston Point
2-168.3
Oyster Pen
2-168.4
Hamlet
Piles
Oyster Pen
SAN ANDREAS
Nick's Cove
Nicks Cove
BM 10
Water Tank
Hog Island
Hog Island
Blakes Landing
2000 0 2000 4000 Feet
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Carl Jochums (OSPR) & Jo Sanders (OSPR)
Date: 20/JUN/05
Site Name: Walker Creek and Delta
Site Number: 2-168
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

Thomas Guide Location	Latitude N	Longitude W
Marin County	3 8 12	122 56

County: Marin

USGS Quad: 7.5" Quad: Tomales, CA

NOAA Chart: Bodega and Tomales Bays 18643

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes the islands and a sand bar in the middle of Tomales Bay. The island is actually two vegetated rocky islands with mixed sand and gravel beaches surrounding them. The sandbar, which is exposed at low tides at the northeast corner of the island, is a favorite resting area for brown pelicans and local cormorants, and occasional pinipeds. The northern island is much larger and has a grove of trees that provide roosting and nesting for cormorants. Waters at the northwest corner are deep enough to approach the island, but recreational use and trespass is prohibited. The island is the property of Pt. Reyes National Seashores.

SEASONAL and SPECIAL RESOURCE CONCERN

"B" priority site due to its importance as a roosting area for brown pelicans and shorebirds during the winter.

RESOURCES OF PRIMARY CONCERN

Hog Island is an land mass well elevated above the tidel ines of Tomales Bay. Most sides of the Island are rock faces but there are course grain beaches on the north and the west point and a fine grain sand spit on the northeast corner. The upland is a eucaliptus grove with a grassy understory.

The sensitivity of this location is derived from the sea and shore birds which favored the spit as a resting area. During the winter, 20 to 30 (and as many as 50) threatened brown pelicans, plus cormorants and other marine birds, use the spit as a casual resting area. Cormorants roost and nest in the trees.

This was a historic harbor seal haul out (200 in May-June 1991) but currently is rarely used due to disturbance of boating traffic.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Audubon	Audubon Canyon Ranch	(415) 868-9244
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	John Kelly	Audubon Canyon Ranch	(415) 663-8203
	Mary Ellen King	Audubon Canyon Ranch	(415) 663-8203
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 12	122 56

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Greatest potential for impact is oiling or distrubing roosting US threatened brown pelicans and other seabirds. If the spit becomes oiled, birds will get oiled when they land there. Also, response activity can disturb birds nesting and roosting in the trees or on the island. Stay off the upland portion of the island unless accompanied by a Pt. Reyes National Seashore representative.

HAZARDS and RESTRICTIONS:

Shallow shoals possible when approaching island.

SITE STRATEGIES

Strategy 2-171.1 Objective: Hazing Pelicans and seabirds away from oil on beach

ACP DATE

When oil on spit is a hazard for loafing birds, contact US Fish and Wildlife Service staff and Pt. Reyes National Seashore to advise of passive hazing measures. Mylar tape and balloons are recommended measures to keep birds from settling on oiled spit.

Strategy 2-171.2 Objective: Protection booming to minimize shoreline cleanup.

ACP DATE

Surround the island with 2500 ft of 6X6+ protective boom. Anchor at 500' intervals and more frequently on the windward side.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-171.1	0	0		0	0		0	1	0		3 mylar tape, mylar baloloons, stakes	2	
2-171.2	2500	0		0	8	15+#/danforth	2	1	0			8	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Tomales Bay. Accessible by water only. Launch at Nicks Cove just east of Hog Island. Site includes the islands and a sand bar in the middle of Tomales Bay.

LAND ACCESS: none - water access only

WATER LOGISTICS: Sandbar is exposed at all tides.
Limitations: depth, obstruction

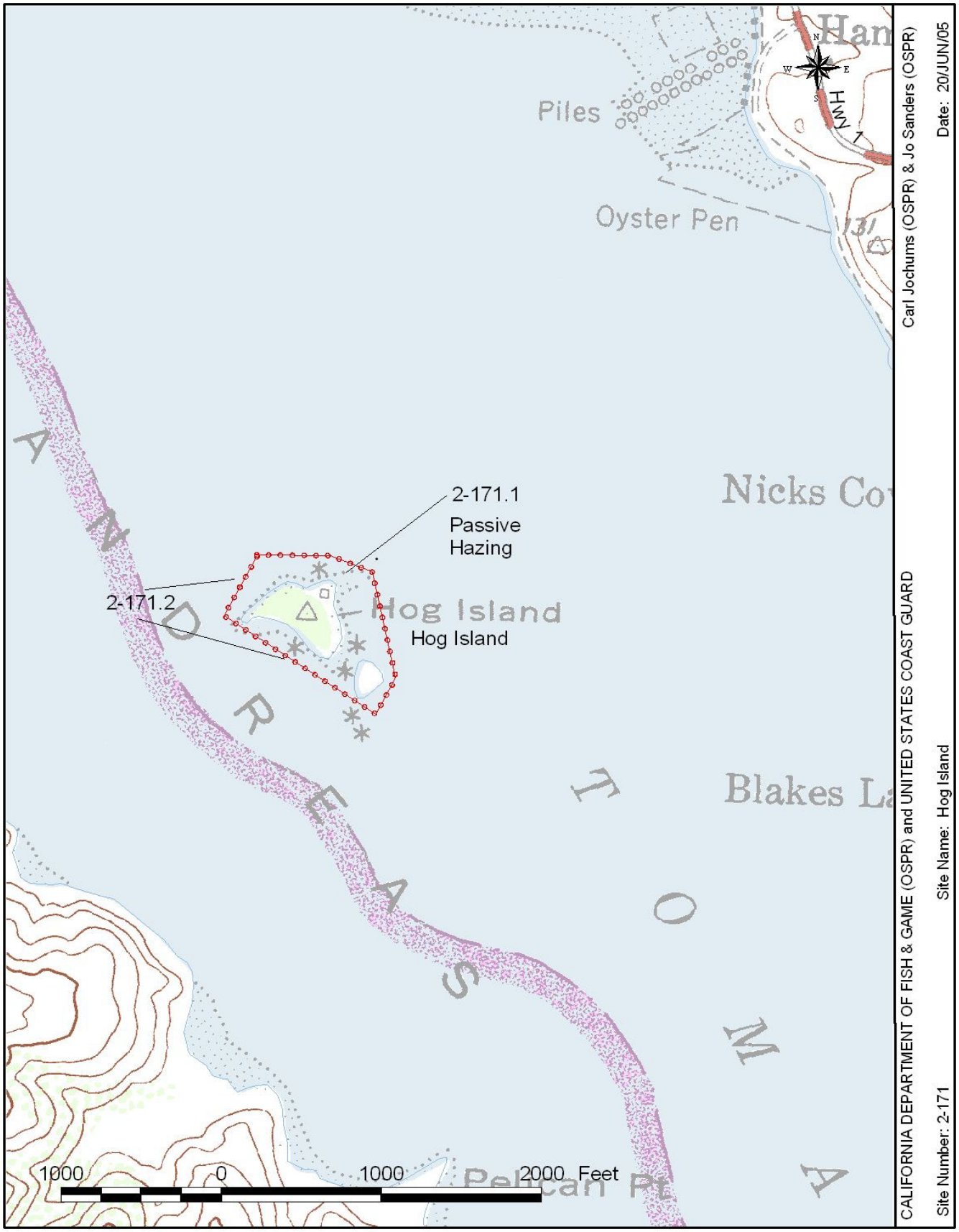
Launching, Loading, Docking and Services Available: Nearest boat ramp is at Nicks Cove, Marshal, Sacramento Landing

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Nicks Cove, Marshall, or Lawson's Landing. All have other support facilities.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-174 -A Site Summary- White Gulch

2-174 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 12	122 57
USGS Quad:	**Tomales,Drakes Bay, Inverness**	NOAA Chart: **Bodega and Tomales Bays 18643**		

Last Page Update :

SITE DESCRIPTION:

Small bay on west shore of Tomales Bay within Philip Burton Wilderness of Point Reyes National Seashore. A small bay lined with freshwater and saltwater marsh vegetation. Eelgrass beds are present in the shallow water areas inside and offshore of the bay.

SEASONAL and SPECIAL RESOURCE CONCERN

This is an "A" priority year-round due to extensive marsh habitat supporting listed species such as the, saltmarsh yellowthroat (songbird) and the northcoast birds-beak (plant). Eelgrass beds are in the bay. Waterfowl are abundant during the fall and winter months.

RESOURCES OF PRIMARY CONCERN

Saltwater wetlands around the bayfront and freshwater wetlands up the gulch. Eelgrass beds are in shallow water areas inside and offshore of the bay. A variety of waterfowl and seabirds can be found in the bay at any time of year. Tule elk occasionally can be found near the shore feeding on marsh vegetation.

A variety of listed species and those vulnerable to oil spills can be found here throughout the year, such as: saltmarsh common yellowthroat, American white pelican, brown pelican, osprey, wading birds and waterfowl.

Tule elk and river otters may occasionally visit the shoreline and wetlands.

Pacific herring spawn on the eelgrass during the winter (Nov.-Mar.). Surfperch and halibut can also be found in the bay.

Eelgrass beds are a predominant concern. The North coast bird's-beak, and endangered plant, can be found on the upper marsh areas. A variety of saltwater and freshwater plant species are present at this site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Grant Fletcher		(707) 938-5304
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	John Kelly	Audubon Canyon Ranch	(415) 663-8203
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 12	122 57

Last Page Update : 1/1/1996

CONCERNS and ADVICE to RESPONDERS:

Considerable impact is possible to the extensive wetland around White Gulch and the eelgrass beds just offshore in the tidal areas. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow water inside bay.

SITE STRATEGIES

Strategy 2-174.1 **Objective: Exclusion booming to prevent oil contamination to wetlands within White Gulch.** ACP DATE

Deploy 2000 feet of 4X4 boom within White Gulch in two layers. Tidal currents are aggressive at mouth of Gulch. Set booms inside of Gulch, out of current. Boom should be set approximately halfway into Gulch. Anchor each boom end as close as possible to cliff face. Leave a trailing boom length on both sides for a tidal seal.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-174.1	0	2000	0	0	4	4x22lbdanforth	1	2	0		0	6	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Tomales Bay. This site is accessible only by water from launch ramps at Miller Park, Inverness, or Lawson's Landing. Small bay on west shore of Tomales Bay within Philip Burton Wilderness of Point Reyes National Seashore.

LAND ACCESS: Unknown, but doubtful.

WATER LOGISTICS: Shallow water inside bay
Limitations: depth, obstruction

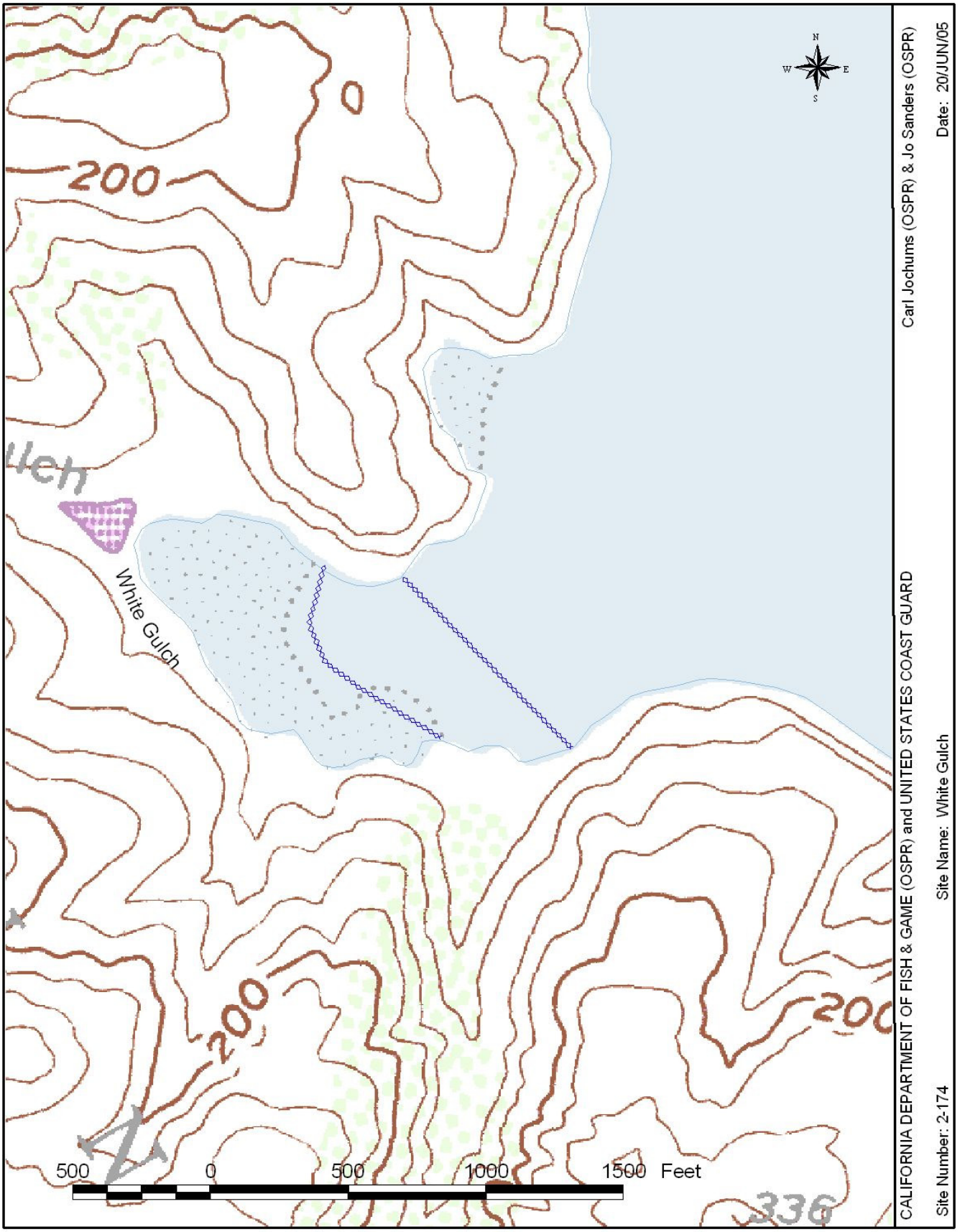
Launching, Loading, Docking and Services Available: Nearest launch ramps at Nicks Cove, Lawson's Landing and Inverness.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Nicks Cove or Lawson's Landing which also includes some facilities.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-177 -B Site Summary- Pelican Point

2-177 -B

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 11	122 56
USGS Quad:	**Tomales,Drakes Bay, Inverness**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Pelican Point is a sand spit and shallow water sandbarwhich extends into the bay from the steep Tomales headlands just south of Hog Island. It is a sandy point where the strong influent currents of Tomales Bay abruptly fade resulting in deposit of a sand point and bar which extends well into the bay. The south side of the point is an elongated fine grain sand beach. Waters are deep both before and after the point and collection eddies form behind (south) of the point. The point is a favored resting area for sea birds including brown pelicans and as many as 50 or more pelicans may loaf there. This site is also of cultural interest and has been used extensively in the ancient past has extensive native American midden deposits. Pelican Pt is within the Philip Burton Wilderness of Point Reyes National Seashore.

SEASONAL and SPECIAL RESOURCE CONCERN

"B" priority site due to its importance as a roosting area for brown pelicans and shorebirds during the winter.

RESOURCES OF PRIMARY CONCERN

Pelican Point is a low sandy point where the strong influent currents of Tomales Bay abruptly fade resulting in deposit of a sand point and bar which extends well into the bay. Waters are deep both before and after the point and collection eddies form behind (south) of the point, where there is some marshy habitat present, both freshwater and saltwater vegetation, and transition into upland habitats of Tomales headland.

The sensitivity of this location is derived from the sea and shore birds which favored the spit as a resting area. During the winter this site is heavily used as a roost site for the threatened brown pelicans (as many as 50) and other marine birds as a casual resting area.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 11	122 56

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Oil at this site may contaminate pelicans and shorebirds using this site. The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

There are extreme shallows at the tip of the point all the way to the channel marker.

SITE STRATEGIES

Strategy 2-177.1 Objective: Haze birds away from point

ACP DATE
7/1/2002

Use passive hazing devices to keep birds off oiled shoreline: mylar tape, mylar balloons. (If this site is used for collection as indicated in 2-164.1, then hazing may not be necessary; refer to strategy for oil collection activity at this location.)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-177.1	0	0		0	0		1	0	0		mylar tape, mylar balllloons, stakes	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Take Hwy 1 to Tomales Bay. This site is accessible only by water. From the east shore there is launching at Nicks Cove, Marshall, Miller Park, or Lawson's Landing. From the west shore boat access is limited at Inverness and Sacramento Landing. Pelican Point is a sand spit and shallow water sandbarwhich extends into the bay from the steep Tomales headlands just south of Hog Island.

LAND ACCESS: None; boat access only

WATER LOGISTICS: Shallow water around point
Limitations: depth, obstruction

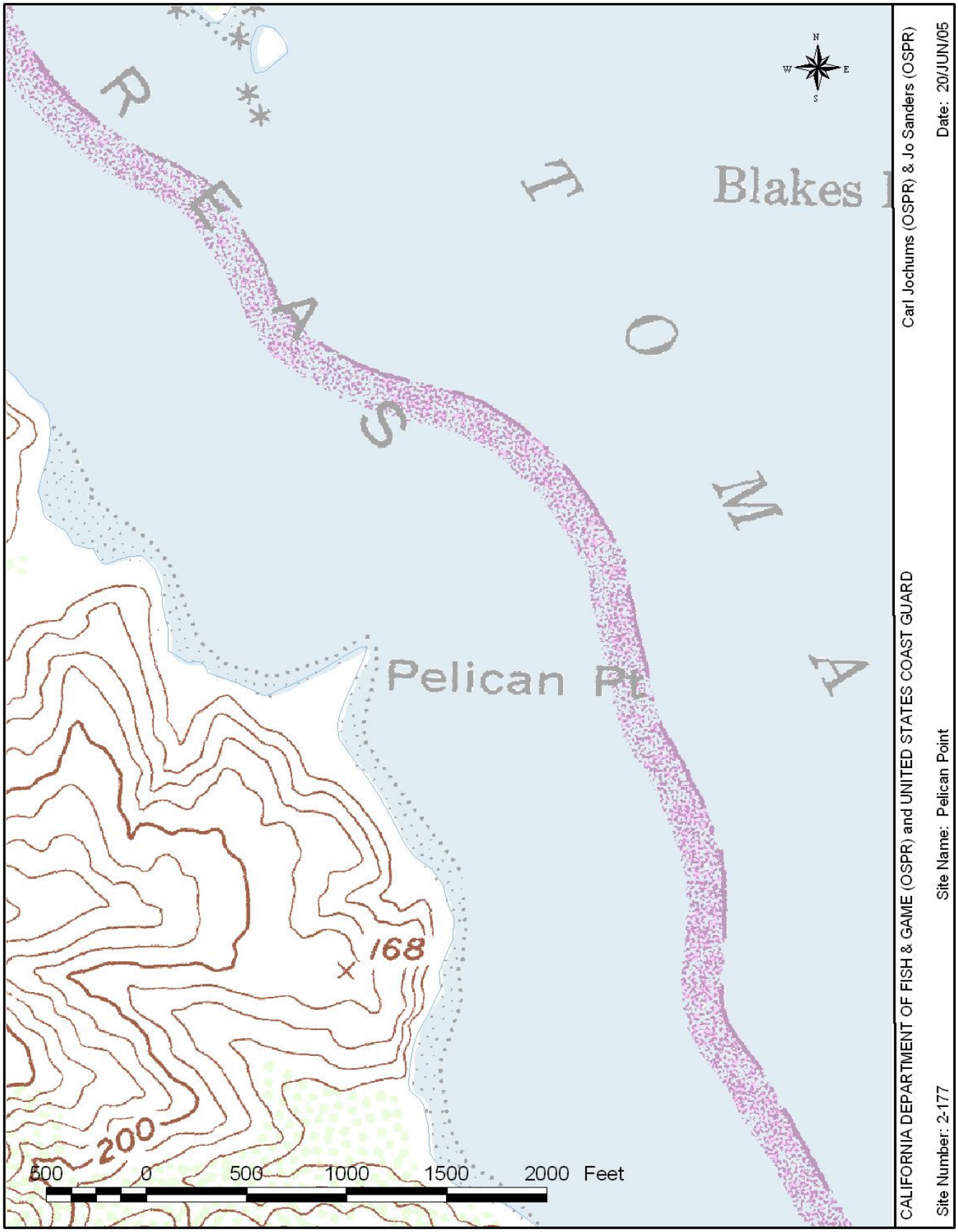
Launching, Loading, Docking and Services Available: Nearest launch ramps at Nicks Cove, Lawson's Landing and Inverness. There is a boat lift at Marshall

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Nicks Cove or Lawson's Landing which also includes some facilities.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-179 -A Site Summary- Cypress Grove Preserve 2-179 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 10	122 54
USGS Quad:	**Tomales,Drakes Bay, Inverness**	NOAA Chart: **Bodega and Tomales Bays 18643**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

The site is located on a 135 acre nature preserve owned by Audubon Canyon Ranch at Cypress Grove Point on the east shore of Tomales Bay. The northern saltwater marsh begins approximately 1/2 mile north of Cypress Grove Point and extends south along the east shore to about 2500' north of the Point. A freshwater/brackish marsh lies behind a railroad levee adjacent to the saltmarsh. This sensitive site encompasses both a saltwater and freshwater/brackish marsh. The saltwater marsh along the east shore of Tomales Bay is relatively narrow (<25 yards wide) and not extensive (<200 yds long). A large freshwater/brackish marsh lies behind a levee adjacent to the saltwater marsh. A breach in the levee which functions as a narrow tidal channel is covered by a foot bridge. A white Audubon research building is located just south of the foot bridge. A wooden bulkhead structure lies south of the marsh and adjacent to the white research building.

SEASONAL and SPECIAL RESOURCE CONCERN

Aquaculture leases are nearby. Marshes are "A" priority year-round. Shorebirds present during fall and winter months. Waterfowl present during winter.

RESOURCES OF PRIMARY CONCERN

Freshwater, brackish and saltwater marsh can be found in Cypress Grove Preserve, making this site an "A" priority year-round. Special status bird, reptile, amphibian and plant species are found within the marshes at the site.

Multiple bird species use freshwater, brackish and saltwater marsh at this site. Several are special status bird species including: common yellowthroat which is present all year and common in the marshes of Tomales Bay; tri-colored blackbirds which used to nest in the freshwater marsh before the levee was breached; Northern Harriers which nest in and around the site during spring and summer months; and black rails which are expected at the site in the near future given their presence in nearby locations. Shorebirds are abundant along the shoreline and in the marshes during the fall and winter months. Waterfowl are also common in the nearshore waters during the winter.

A variety of fish and invertebrates utilize the mudflats and marshes throughout the year. Herring enter the bay to spawn on eelgrass in the winter (Nov-Mar). Dungeness crab use the bay as a nursery area to spawn and grow.

Special status Northcoast bird's-beak (Cordylanthus maritimus palustris) is found within the saltmarsh.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Grant Fletcher		(707) 938-5304
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	John Kelly	Audubon Canyon Ranch	(415) 663-8203

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 10	122 54

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow tidal flats when approaching from the water.

SITE STRATEGIES

Strategy 2-179.1 **Objective: Exclude oil from entering tidal channel to freshwater marsh.** ACP DATE 1/1/1996

Deploy 200' of 6" exclusion boom in chevron configuration to protect tidal channel to freshwater/brackish marsh.

Strategy 2-179.2 **Objective: Protect bayfront saltmarsh from oiling.** ACP DATE

Deploy 700' of 6" exclusion boom along shoreline in front of saltmarsh area.

Strategy 2-179.3 **Objective: Protection booming of wooden bulkhead structure adjacent to white research building from oiling. Divert oil from riprap on shore near footbridge.** ACP DATE

Deploy 100' of 6" exclusion boom in shallow chevron configuration around wooden bulkhead structure. Deploy 200' of 6" exclusion boom in shallow chevron configuration around riprap area.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-179.1	0	0	200	0	0	0	0		0	0		0	
2-179.2	0	0	600	0	0		0	0	0				
2-179.3	0	0	300	0	0		0	0	0				

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Tomales Bay. Site is on the east shore and access through a marked gate approximately 0.75 miles north of Marshall. The site is located on a 135 acre nature preserve owned by Audubon Canyon Ranch at Cypress Grove Point on the east shore of Tomales Bay. The northern saltwater marsh begins approximately 1/2 mile north of Cypress Grove Point and extends south along the east shore to about 2500' north of the Point. A freshwater/brackish marsh lies behind a railroad levee adjacent to the saltmarsh.

LAND ACCESS: All vehicles

WATER LOGISTICS: Shallow water nearshore
Limitations: depth, obstruction

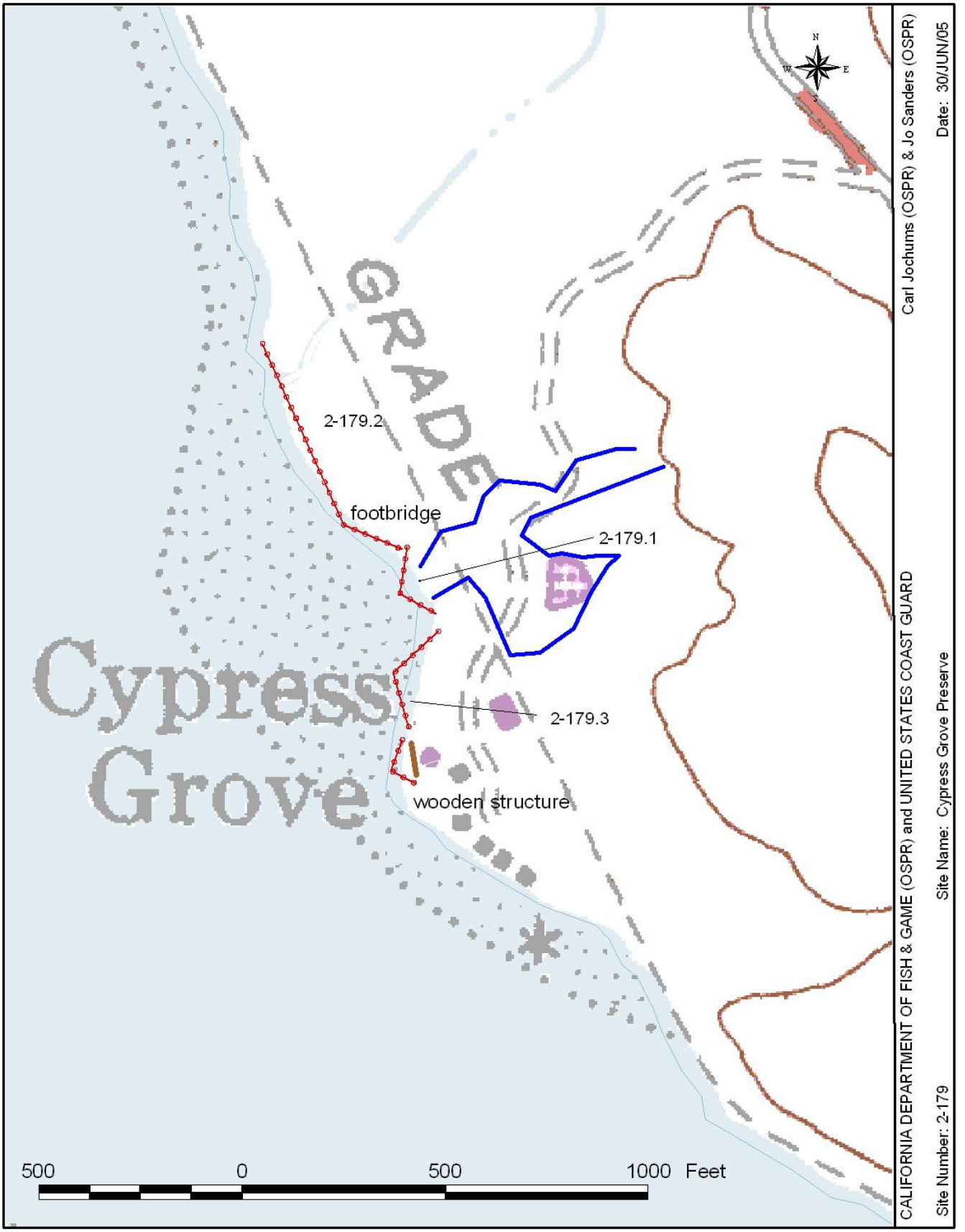
Launching, Loading, Docking and Services Available: Boat ramps at Nicks Cove and Lawson's Landing

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Small amount of staging can be done on-site. A larger staging area would be at Nicks Cove.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Sacramento Landing Marshes

2-181 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 09	122 54
USGS Quad:	**Tomales,Drakes Bay, Inverness**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

This Site extends from Lairds Landing to Shell Beach. Although this entire shoreline is sheltered, there is a wide variety of habitats and ecologic sensitivites. Upland varies between steep and mild gradient hills, and in parallel, shoreline varies between rocky exposure at drainge divides to recessed shorelines with pocket beaches and marshy pockets and margins. Three significant tidal marshes in pocket coves are the unnamed drainage just north of Sacramento Landing, Indian Beach, and Shallow Beach. As is the case throughout the bay, every drainage has cultural sites associated with it. Fronting most of the shoreline is mudflats and eelgrass beds. The shoreline from Lairds Landing to Duck Cove is Pt. Reyes National Seashore and the remainder is within Tomales Bay State Park. Access to this site is though the cooperation of these respective agencies. The buildings at Sacramento Landings are being converted to a laboratory facility. There is limited landside access through parks lands.

SEASONAL and SPECIAL RESOURCE CONCERN

The site has "A" priority all year due to the presence of wetlands and threatened and endangered species. Herring spawning is seasonal important (Nov-March). Migratory bird density increases in the fall and winter.

RESOURCES OF PRIMARY CONCERN

This long stretch of has a variety of habitats along its length, but the principal habitat at risk are several saltmarshes at the back of pocket coves: the unnamed drainage just north of Sacramento Landing; Indian Beach; and Shallow Beach. The marsh also serves as a nursery area for many species of fish and invertebrates. The bay margin is mudflats and eelgrass beds and habit for invertebrates, fish, and foraging birds.

Several bird species of special concern are resident or casual visitors. The Federal Listed species brown pelican (T) are found here occasionally or seasonally; California threatened species such as the California black rail, salt marsh yellowthroat, and merlin are common in the bay marshes. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant, are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr) and many are resident throughout the year.

During the winter months (Nov-Mar), herring spawn in eelgrass beds throughout the bay, including those which may be present offshore.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	John Kelly	Audubon Canyon Ranch	(415) 663-8203
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	Carlos Porrata	CA State Parks, Tomales Bay (SP)	(415) 669-1140
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 09	122 54

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow water in the nearshore area.

SITE STRATEGIES

Strategy 2-181.1 Objective: Exclude/protect marshes by booming across cove/marsh front ACP DATE

Deploy boom across frontage of marshes at pocket coves. Though some land access is possible, boom may best be delivered by a boat capable of beaching on or nearshore so that boom can be anchored at shore. Anchor boom near shore and leave trailing lengths of booms to ensure that oil will not short circuit around boom during changes in tide elevation. 1000' of 4X4 or large boom is needed:.750' at the unnamed drainage just north of Sacramento Landing;100' at Indian Beach; and 150' at Shallow Beach.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-181.1	0	1000		0	9	15+# anchors and stakes	1	1	0			4	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Best access is via boat. However, if driving, take Hwy 1 to Point Reyes Station near the head of Tomales Bay. Proceed westward on Sir Francis Drake through Inverness, turn right on Pierce Point Road, turn right on L Ranch Road, take the second right onto a dirt road to Sacramento Landing. This land is either State Park or Pt. Reyes National Seashore property and access should be made through contacts to them. This Site extends from Lairds Landing to Shell Beach.

LAND ACCESS: via dirt road, 2WD

WATER LOGISTICS: Shallow water near shore.
Limitations: depth, obstruction

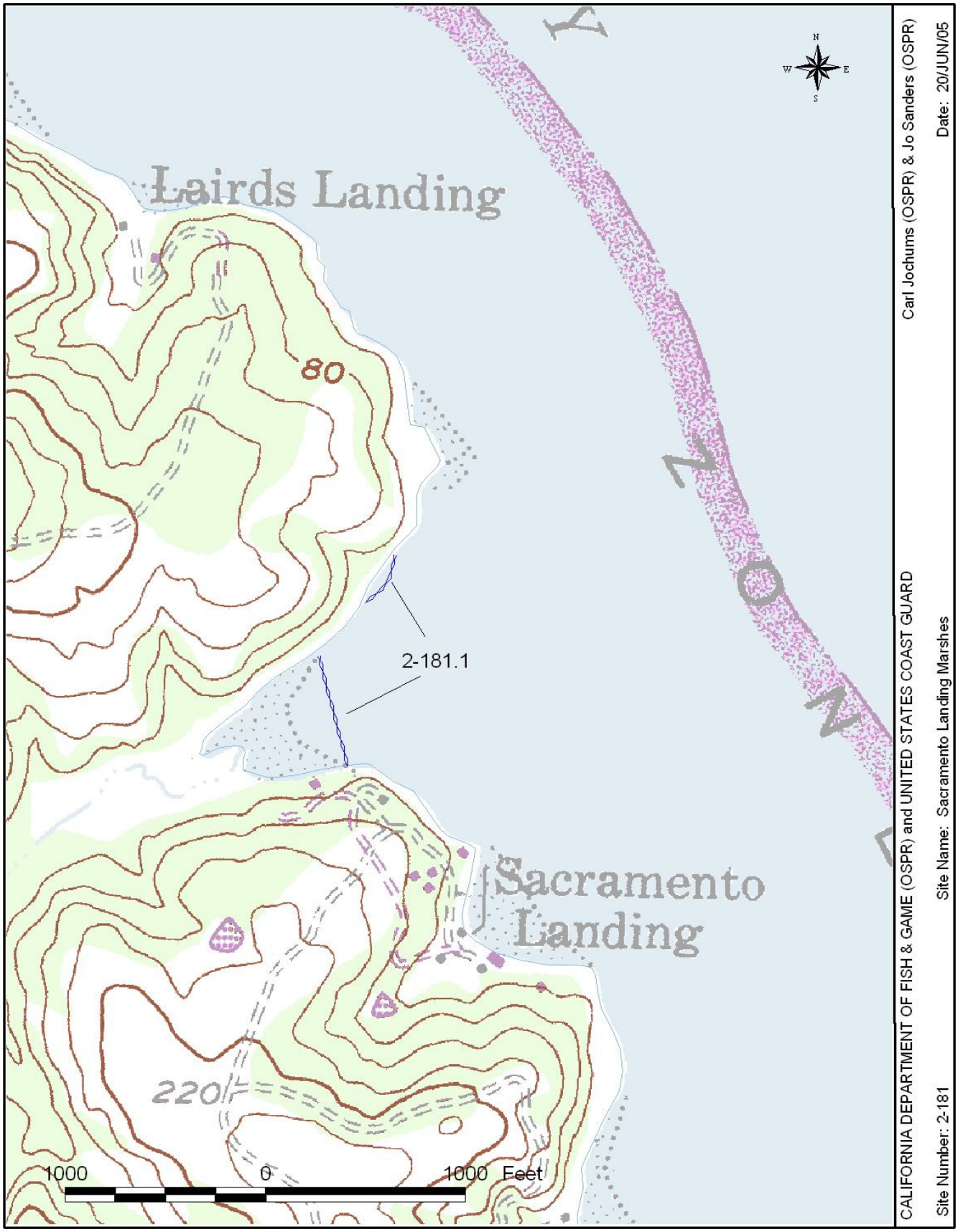
Launching, Loading, Docking and Services Available: Beach launch at Sacramento Landing. Nearest launch ramps at Nicks Cove, Marconi, and Inverness. Boat hoist at Marshall.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Staging at Sacramento Landing, Pt Reyes National Seashore facilities or Inverness. Contact Pt. Reyes National Seashore for access and potential limitations. Alternate is Nicks Cove and possible Marshall. Food available at Nicks, Marshall, and Inverness and gasoline at Inverness.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-184 -A Site Summary- Tomasini Point 2-184 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 07	122 52
USGS Quad:	**Quad: Inverness; Point Reyes NE**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Includes all of shoreline around the point and the mudflat and wetland areas on the north as well as south side of the point, including those behind the broken levee. This site is part of Tomales Bay State Park. Both Millerton Pt and Tomasini Pt have similar geography: an elevated landmass protruding into the bay resulting in a prograding tidal marsh on the south side which is analagous to a sand spit formation with a lagoon or wetland behind. In this case there is and extensive marsh in the interior of thr point. This marsh is bisected by an old railroad grade with flow communication to both halves of the marsh. There is also a pocket of marsh at the forward edge of the peninsula near Hwy 1. The habitats which result are extensive tidal salt marshs, exposed bay front tidal mudflats, and sheltered tidal mudflats extending in front of the marsh. The northern shore of the point is an abrupt cliff which tapers to the sandy spit on the west shore. The north face is exposed to wave wash and errosion and is very abrupt and seep at points; beaches are very narrow and consist of mixed sand and gravel. Access on the north is precipitous and very limited. There are oyster leases north and south of the point. This site is part of Tomales Bay State Park.

SEASONAL and SPECIAL RESOURCE CONCERN

This site is an "A" priority year-round due to the presence of the marsh and sensitive plant species nearby. There is heavy migratory bird use in fall and winter. Herring spawning in eelgrass nearby from November - March. Aquaculture leases are nearby.

RESOURCES OF PRIMARY CONCERN

Tidal salt marsh and mudflat habitats are the principal concerns which determine the sensitivity of this site. Marshes support a rich species assemblage and the mudflats are important for invertebrate populations and as foraging habitat for birds and fish life. Oyster culture is an economic concern.

Several bird species of special concern are resident or casual visitors. The Federal Listed species brown pelican (T) are
found here occasionally or seasonally; California threatened species such as the California black rail, salt marsh yellowthroat, and merlin may be present in the marshes. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr).

A variety of fish and invertebrates utilize the mudflats and marshes throughout the year. Herring enter the bay to spawn on eelgrass in the winter (Nov-Mar). Dungeness crab use the bay as a nursery area to spawn and grow.

A variety of clams, worms and crabs may be found in and on the mudflats and intertidal shoreline areas.

Salt marsh bird's-beak, a listed plant species, may be found in the upper tidal marsh region at several locales. Salicornia bigelovi in the marsh. Eelgrass beds are present in the shallow nearshore waters.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
BTEL	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Grant Fletcher		(707) 938-5304
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
B	John Kelly	Audubon Canyon Ranch	(415) 663-8203
B	Brannon Ketchum	US National Park Service, Pt. Reyes (NS)	(415) 464-5192
ELBT	Carlos Porrata	CA State Parks, Tomales Bay (SP)	(415) 669-1140

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	38 07	122 52

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

Shallow waters nearshore. Some telephone wires and poles along shore.

SITE STRATEGIES

Strategy 2-184.1 Objective: Exclude oil from marshes on SW and NE corners of Tomasini Pt

ACP DATE

Contact State Park staff before deploying. The large marsh in the interior or Tomasina Pt has an opening at the southwest point. Boom this mouth with 200' of swamp boom (river boom at least 4X2) deployed in a chevron exclusion with mid-channel anchor and anchoring or staking to shore. Contact State Park staff about protecting the marsh margins northeast and southwest of Tomasini Point: the small marsh just north of Tomasina Pt near Hwy 1, will take at least 200' boom 1 anchor, 4 stakes.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-184.1	0	400		0	3	1 anchor and 2 stakes	0	1	0			2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Site is located approximately 6 miles north of Pt. Reyes Station and is accessible from Hwy 1 on the eastside shoreline of Tomales Bay. Includes all of shoreline around the point and the mudflat and wetland areas on the north as well as south side of the point, including those behind the broken levee. This site is part of Tomales Bay State Park.

LAND ACCESS: Large truck to dirt parking area.

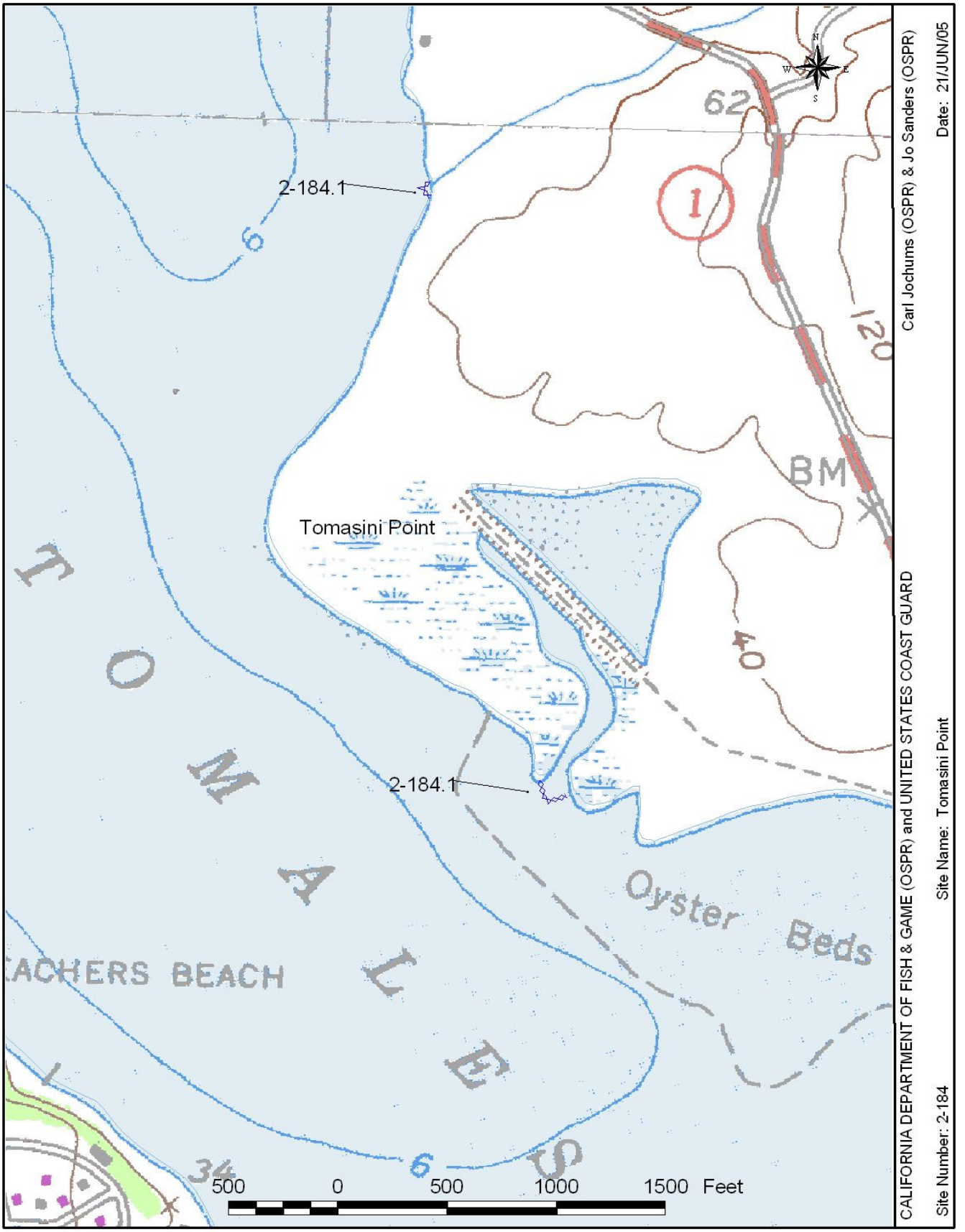
WATER LOGISTICS: Shallow water when approaching site
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Nearest launch ramps at Nicks Cove and Inverness.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-186 -A Site Summary- Millerton Point

2-186 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 06	122 51
USGS Quad:	**7.5" Quad: Inverness, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site encompasses the east side of Tomales bay from Bivalve to just north of Millerton point, and includes the beach on the north side of the point and the small wetland near Hwy 1, the saltmarsh on the south side of Millerton Pt, and, further south, several pocket marshes between the railroad levee and Hw1 at mouth of Millerton Creek and three other unnamed drainages. Both Millerton Pt and Tomasini Pt have similar geography: an elevated landmass protruding into the bay resulting in a prograding tidal marsh on the south side (down current). There is also a pocket of marsh at the forward edge of the peninsula near Hwy 1. The habitats that result are extensive tidal salt marshs and bayfront tidal mudflats and sheltered tidal mudflats extending in front of the marsh. Where drainages flow into the bay, delta marshes form; most of these are confined behind the remnants of the old railroad grade, the grade has openings which allow outflow and tidal exchange. The northern shore of the point is exposed to wave wash and erosion; beaches consist of mixed sand and gravel. There are oyster leases north of the point. This site is part of Tomales Bay State Park.

SEASONAL and SPECIAL RESOURCE CONCERN

This site has "A" priority all year due to presence of listed species and tidal wetland habitat.

RESOURCES OF PRIMARY CONCERN

Tidal salt marsh and mudflat habitats are the principal concerns which determine the sensitivity of this site. Marshes support a rich species assemblage and the mudflats are important for invertebrate populations and as foraging habitat for birds and fish life. Oyster culture is an economic concern.

Several bird species of special concern are resident or casual visitors. The Federal Listed species brown pelican (T) are found here occasionally or seasonally; California threatened species such as the California black rail, saltmarsh yellowthroat, and merlin are common in bay marshes. Osprey, nests at Millerton point and nearby on a duck blind in the Bay. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr).

Relatively recently, the river otter has made a come-back in southern Tomales Bay after an absence for 85 years.

A variety of fish and invertebrates utilize the mudflats and marshes throughout the year. Dungeness crab use the bay as a nursery area to spawn and grow.

Salt marsh bird's-beak, a listed plant species, may be found in the upper tidal marsh region in some locales.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	John Kelly	Audubon Canyon Ranch	(415) 663-8203
	Carlos Porrata	CA State Parks, Tomales Bay (SP)	(415) 669-1140
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	Bodega and Tomales Bays 18643	3 8 06	122 51

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

There is exceedingly shallow water and oyster beds nearshore. Telephone poles and lines may cross over site, posing an aerial hazard.

SITE STRATEGIES

Strategy 2-186.1 Objective: Exclude oil from entering marshes ACP DATE

There are a several tidal marshes along the length of this site. Each can be closed with short pieces of swamp boom (4X2 or greater) deployed in a chevron exclusion formation. Deployments must be made when tides are 2.5' or greater to permit adequate draft. It is recommended that deployment be scheduled for the incoming tide to avoid stranding. Contact local State Parks and oystermen to aid in locating deploy locations and navigating the exceedingly shallow waters. The following are a list of boom deployment locations from north to south.

a) marsh mouth on unnamed drainage 0.75 miles north of Millerton - 100' boom, 1 anchor, 2 stakes
b) marsh channel opening at SW tip of Millerton Pt - 200' boom, 3 anchors, 2 stakes, 200' oil snare inside boom
c) marsh mouth on Millerton Creek Gulch just south of Millerton Pt - 200' boom. 1anchor, 4 stakes
d) marsh mouth on unnamed drainage 0.5 miles south of Millerton - 100' boom, 1 anchor, 2 stakes
e) marsh mouth on unnamed drainage 0.75 miles south of Millerton - 100' boom, 1 anchor, 2 stakes
f) marsh mouth on unnamed drainage 1.2 miles south of Millerton - 100' boom, 1 anchor, 2 stakes

Strategy 2-186.2 Objective: Exclusion Protection of shoreline from Millerton Pt to Tomasini Pt. Also excludes oil from large areas of oyster production. ACP DATE

To keep oil from moving near or onto the shoreline, deploy 2500' of swamp boom (4x2 or larger) from Tomasini Pt to Millerton Pt. Anchor up on shore. Contact local oystermen for aids and direction in navigating these extreme shallows.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-186.1	0	800	200 sna	0	24	8/12+#/danforths & 16 stakes	0	3	0		very shallow draft skiffs & 16 stakes	6	
2-186.2	0	2500		0	6	6 danforths with chain and stakes	1	1	0		stakes and shallow draft boats	5	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to the eastside shore of Tomales Bay. Approximately 5 miles north of Pt. Reyes Station. Site encompasses the east side of Tomales bay from Bivalve to just north of Millerton point, and includes the beach on the north side of the point and the small wetland near Hwy 1, the saltmarsh on the south side of Millerton Pt, and, further south, several pocket marshes between the railroad levee and Hw1 at mouth of Millerton Creek and three other unnamed drainages.

LAND ACCESS: large truck to parking area above site

WATER LOGISTICS: shallow near site
Limitations: depth, obstruction

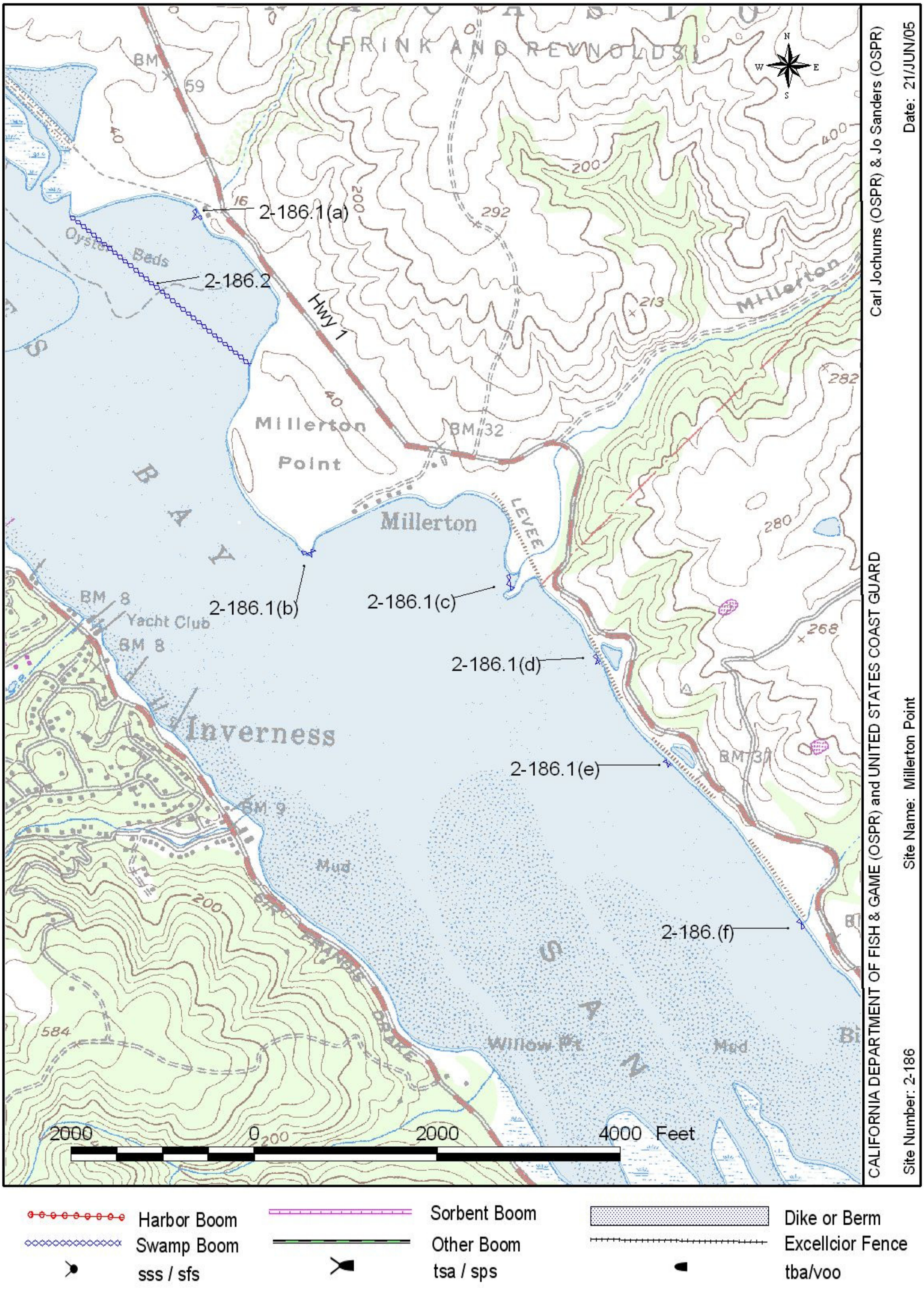
Launching, Loading, Docking and Services Available: Nearest launch ramps at Inverness. Also Nicks Cove, Marconi, and beach launch at Millerton.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Small staging area in unpaved parking lot above site. Inverness is nearby lau

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:


2-186.1(a)
2-186.2
2-186.1(b)
2-186.1(c)
2-186.1(d)
2-186.1(e)
2-186.(f)
Hwy 1
Millerton Point
Millerton
Inverness
Yacht Club
Oyster Beds
LEVEE
Willow Pt.
Mud
2000 0 2000 4000 Feet
Carl Jochums (OSPR) & Jo Sanders (OSPR)
Date: 21/JUN/05
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Site Name: Millerton Point
Site Number: 2-186
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

2-188 -A Site Summary- Inverness 2-188 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin County**	Marin County	3 8 06	122 51
USGS Quad:	**7.5" Quad: Inverness, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

This site is at the extreme southwesterly margin or Tomales Bay and extends from the State Park Boundary north of
Teachers Beach about 1 miles south to southern edge of Inverness. The bay margin is very shallow in this area and has a wide band a tidal salt marsh and mudflats. Mudflats become very wide in the southern half of the site. The marshes and a portion of the mudflats are within the Point Reyes National Seashore. Most of the land adjacent to this site is private property and the town of Inverness is in the northern half. Sir Francis Drake Highway parallels the shoreline for most of the length of this site. Ownerships here are scattered between private and public.

SEASONAL and SPECIAL RESOURCE CONCERN

This is an "A" priority due to the extensive tidal marsh and the presence of sensitive plant and animal species.

RESOURCES OF PRIMARY CONCERN

The margin of the bay has a belt of tidal saltmarsh and wide mudflats and is habitat variety of fish and invertebrates throughout the year. The bay margin, marsh, mudflats and eelgrass beds also serves as a nursery area for many species of fish and invertebrates is foraging habitat for fish and birds.

Several bird species of special concern are resident or casual visitors. The Federal Listed species brown pelican (T) are found here occasionally or seasonally; California threatened species such as the California black rail, salt marsh yellowthroat, and merlin are common in bay marshes. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant, are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr) and many are resident throughout the year.

Relatively recently, the river otter has made a come-back in southern Tomales Bay after an absence for 85 years.

Herring enter the bay to spawn on eelgrass in the winter (Nov-Mar). Dungeness crab use the bay as a nursery area to spawn and grow.

Salt marsh bird's-beak, a listed plant species, may be found in the upper tidal marsh region. This species and the marshy margin are the prime consideration in setting the sensitivity of this site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
BELO	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Grant Fletcher		(707) 938-5304
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
B	John Kelly	Audubon Canyon Ranch	(415) 663-8203
B	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
ELBO	Carlos Porrata	CA State Parks, Tomales Bay (SP)	(415) 669-1140
ELC	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin County	Bodega and Tomales Bays 18643	3 8 06	122 51

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

Extensive mudflats and shallow water front this site.

SITE STRATEGIES

Strategy 2-188.1 Objective: Protective booming of marshfront where endangered plant occurs. ACP DATE

To prevent oil from threatening endangered plant or its habitat, deploy 1500' of swamp boom (4X2 or greater) from the Yachet club south along the marsh margine. Use anchors and stakes to position the boom. Run boom ends to shore to stop oil from getting around the boom. Deploy from very shallow draft work boats (contact oystermen) when tide is in.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-188.1	0	1500		0	8	anchors and stakes	0	1	0		very shallow water skiff	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Point Reyes Station near the head of Tomales Bay. Proceed westward on Sir Francis Drake to Inverness. This site is at the extreme southwesterly margin or Tomales Bay and extends from the State Park Boundary north of Teachers Beach about 1 miles south to southern edge of Inverness.

LAND ACCESS: Large trucks of shoreline businesses.

WATER LOGISTICS: Extremely shallow water
Limitations: depth, obstruction

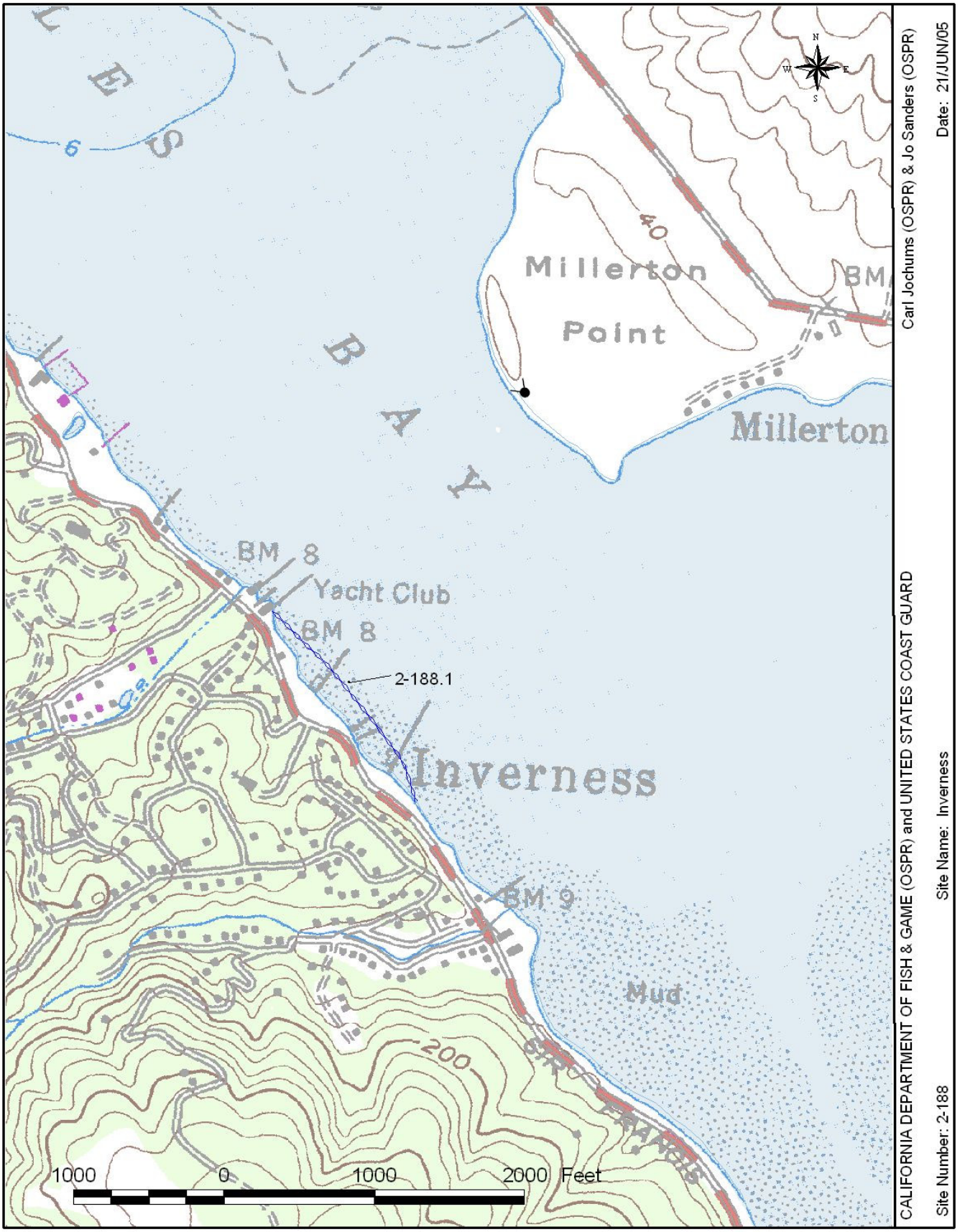
Launching, Loading, Docking and Services Available: Nearest launch ramps at Inverness. Launch also at Nicks Cove and Marconi. Gasoline at Inverness.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Small staging areas may be available at several of the hotels and marina along the Inverness shoreline.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

Site Summary- Lagunitas Creek & Delta Marsh

2-191 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin County**	Marin County	3 8 05	122 50
USGS Quad:	**7.5" Quad: Inverness, CA**	NOAA Chart: **Bodega and Tomales Bays 18643**		

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Site includes all of the tidal saltmarshes and mudflats at the head of Tomales Bay from the south edge of Inverness (about a mile north of Willow Pt on the west side) and Bivalve (on the east side), as well as Lagunitas Creek upstream to Point Reyes Station. Pt. Reyes National Seashore owns most of this site. The site includes mudflats, low to high saltmarsh, and freshwater marshes and riparian corridors. There are extensive mudflats which graduate to prograding saltmarshes north of the levied portion of the delta. The area behind the delta levees is a mix of salt marsh (where levees have been breeched) and wet meadow, but all the levied area will be restored to salt marsh in the future. Lagunitas Creek is tidal upstream to Point Reyes Station and provides the largest freshwater inflow into Tomales Bay. There is riparian habitat in upper estuary on Levees and banks of Lagunitas Creek, Tomasini Creek, and Olema Creek. This stream system is key to California Coho populations. The Tomales Bay Ecological Reserve is an extensive saltmarsh area on the east shore behind the old railroad bed and north of Pt. Reyes Station.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority for protection all year. This very sensitive ecosystem a variety of habitats and a very diverse assemblage of plant and animal species. Freshwater, brackish and saltwater marshes, as well as riparian and mudflat habitats can be found at this site. Several threatened and endangered species use the area. Coho salmon (endangered) and steelhead trout migrate up the creek during the winter (Oct -Mar) and the young smolts out migrate during the spring and summer (May-Aug). Shorebirds and waterfowl can be found by the thousands during the fall and winter months (Oct-Apr).

RESOURCES OF PRIMARY CONCERN

This is an extensive site which includes salt marshes, mudflats, freshwater marshes, and riparian corridors along freshwater inflows. The area has very limited access throughout because of the extreme shallows and marshes. The habitat here support numerous sensitive species and large concentrations of resident and migratory shorebirds, wading birds, and waterfowl. Lagunitas Creek drainage is vulnerable to both land and marine petroleum threats and is a key habitat for threatened salmonid stocks. The fronting and margin mudflats and marshes provide spawning, nursery, and foraging habitat for a variety of birds, fish, and invertebrates throughout the year.

Several bird species of special concern are resident or casual visitors. The Federal threatened species brown pelican and peregrine falcon are found here occasionally or seasonally; threatened species such as the California black rail, salt marsh yellowthroat, and merlin are common in bay marshes. Herons, egrets, shorebirds and waterfowl use the site throughout the year. Shorebirds and waterfowl, including large numbers of brant, are very abundant here as they are elsewhere throughout the bay during the fall and winter months (Oct-Apr) and many are resident throughout the year.

The western pond turtle (in fresh and brackish water areas) and threatened California red-legged frog (in freshwater areas) are present in the Lagunitas Creek Estuary. River otters have recently returned to the estuary after an 85 year absence and frequent this area.

Ninety percent of the remaining coho salmon (endangered) use the Lagunitas Creek system. Both salmon and steelhead trout migrate up the creek during the winter (Oct -Mar), and the young smolts out-migrate during the spring and summer (May-Aug).

Saltmarsh bird's beak is a key endangered plant sustained here, and a wide variety of saltmarsh, brackish, and riparian plants occur throughout this site.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area as is the entire margin of Tomales Bay. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Audubon	Audubon Canyon Ranch	(415) 868-9244
	Bill Cox	CA Dept. of Fish & Game	(707) 823-1001
	Jules Evens		(415) 663-1148
	Grant Fletcher		(707) 938-5304
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622

Waldo Giacomini		(415) 663-1440
Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170
Rich Stallcup		(415) 663-8660

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin County	Bodega and Tomales Bays 18643	3 8 05	122 50

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife. The primary objective is to minimize oiling of marshes by booming. Other concerns are the impacts resulting from response activities such as trampling wetlands, disturbing sensitive plants and animals, and soft mudflats or tromping oil into the sediments which can cause long term oil injury to the environment.

HAZARDS and RESTRICTIONS:

Extremely shallow water.

SITE STRATEGIES

Because the south end of the bay is so shallow, there is little or no opportunity to boom near the marshfront or stream mouths. Booming is much simpler up-bay from the site.

Strategy 2-191.1 **Objective: primary, exclude / protect marsh from subtantial marine oil threat** ACP DATE

Deploy 4200' of Curtain boom (Harbor boom of 9X9 or greater size) from Inverness to Millerton. The boom should be set at a diagonal from the upper end of Inverness (in the area where Sir Francis Drake Highway veers away from the bay) to the low beach on Millerton Point. Tidal currents are minimal here. Contact State Parks about setting up a SSS (shore side skimming) operation on Millerton Point beach.

Strategy 2-191.2 **Objective: 2ndary exclusion / protection of marsh. This is secondary booming strategy to protect south bay from subtantial marine oil threat. More sites are afforded protection but oil will impact here sooner.** ACP DATE

Deploy 4500' of curtain boom (9X9 or greater size) from west shore to east shore north of Shell Beach. The boom should be set at a diagonal from the shoreline near Shallow Beach to Tomasina Pt (the point north of Millerton Point- unnamed on some maps). Tidal currents are minimal here. Contact State Parks about setting up a SSS (shore side skimming) operation: shoreside skimming may be a problem here because shoreline is abrupt bluffs. (If shoreside skimming is impractical, plan an on-water skimming operation, and contact unified command.)

Strategy 2-191.3 **Objective: for upstream spill threats, divert to collection.** ACP DATE

If petroleum enters upstream drainage from a roadside or similar land based spill, minimize spread downstream by diverting to containment/collection. Boom Inverness Creek, Olema Creek, Bear Valley Creek, or other drainage at most feasible access point, such as Inverness Park, Hwy 1 bridge, Bear Valley Road, etc. Position boom swamp boom or other small boom at an angle to the current to avoid entrainment of petroleum. Use local emergency responders to deploy boom. Use local supplies of anchors and punts to secure boom. Temporary absorbants may be useful while awaiting arrival of sorbant boom or skimmers. (Strategy not on Site Strategy Diagram).

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-191.1	4200	0		0	7	22# danforths with chain	3	1	0			9	
2-191.2	4500	0		0	0		3	1	0			9	
2-191.3	0	300		0	0		0	1	0			2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Hwy 1 to Point Reyes Station near the head of Tomales Bay. To gain access to Lagunitas Creek, proceed westward on Sir Francis Drake approximately 1/2 mile to White House Pool County Park area; or at the Hwy 1 Bridge in Pt. Reyes Station. Site includes all of the tidal saltmarshes and mudflats at the head of Tomales Bay from the south edge of Inverness (about a mile north of Willow Pt on the west side) and Bivalve (on the east side), as well as Lagunitas Creek upstream to Point Reyes Station. Pt. Reyes National Seashore owns most of this site.

LAND ACCESS: Large trucks to Pt. Reyes Station and Inverness.

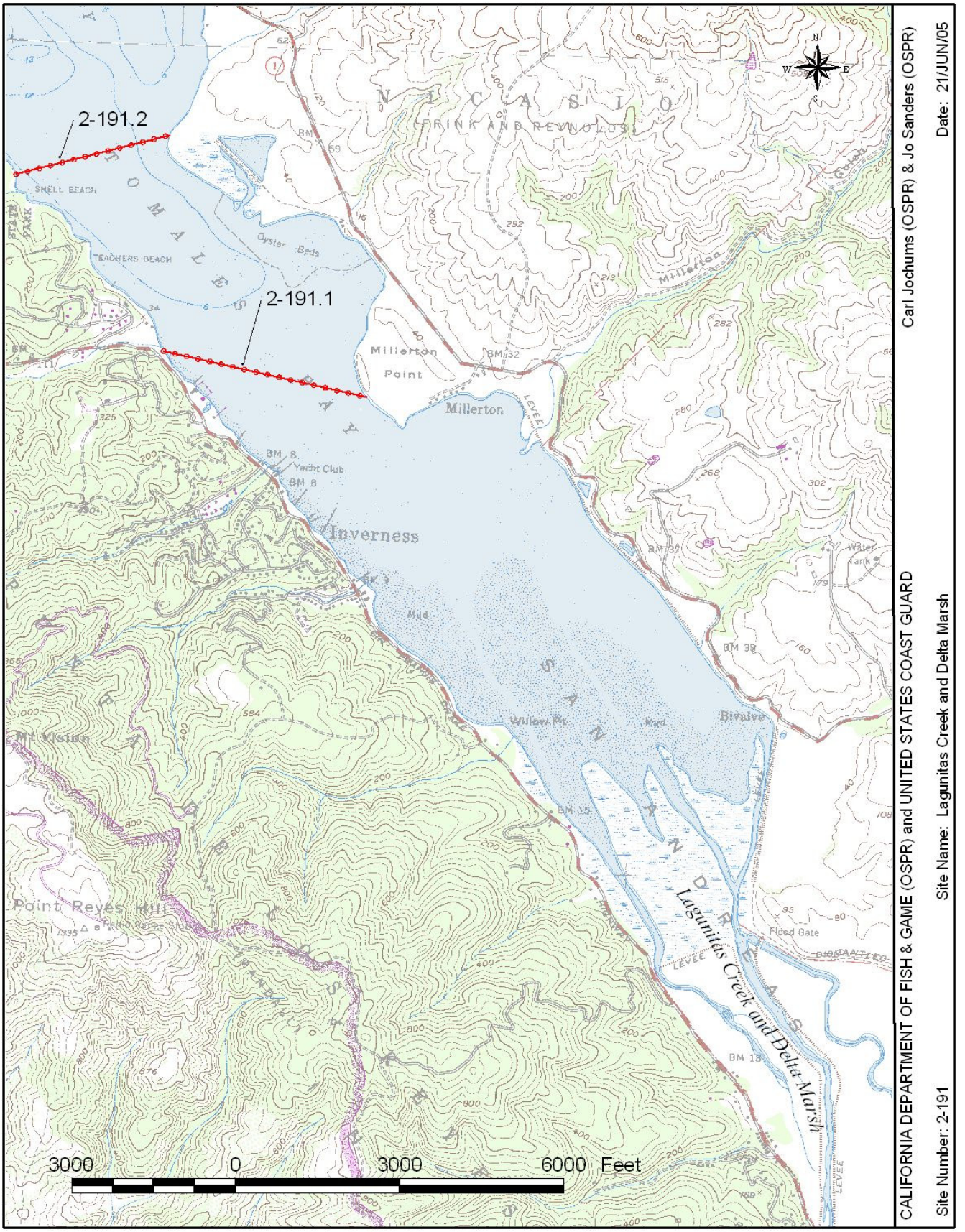
WATER LOGISTICS: Extremely shallow water at the head of Tomales Bay.
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Nearest launch ramps at Nicks cove and Inverness.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin County**	Marin County	3 8 14	123 00
USGS Quad:	**7.5' Quad: Tomales, CA**	NOAA Chart:	**Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

A single rock island pinnacle approximately 300 yds offshore and west of Tomales Point. Large, steep-faced rock island surrounded by several washrocks. Located within Point Reyes National Seashore.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority all year. Seabird colonies most vulnerable during spring and summer months. Designated by the State as an area of Special Biological Significance.

RESOURCES OF PRIMARY CONCERN

Seabird colonies are present all year. They are most vulnerable during the spring and summer months while nesting and after molting.

Moderately sized seabird colonies (ca. 600 in 1980) are located on the island. Pelagic cormorants, pigeon guillemots, ashy storm-petrels, black oystercatchers, common murres, and western gulls all nest on the island.

Harbor seals haul out on the lower portions of the island and the surrounding washrocks throughout the year (>1000 in 1991).

A wide variety of seaweeds, fish, crabs, snails and other sealife are present on and around the island and washrocks.

Intertidal plants and animals are diverse and abundant on the central California coast. Many seaweeds, mussel beds, barnacles, fish, abalone and other invertebrates can be found here.

Surface-canopy forming bull kelp beds and subtidal-canopy forming kelps are common.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170
	Bill Shook	US National Park Service, Pt. Reyes (NS)	(415) 663-8525

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin County	Bodega and Tomales Bays 18643	3 8 14	123 00

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Principal concerns are oil contamination and response activity impacts to seabirds, marine mammals, and other vulnerable intertidal plants and wildlife. The primary objective is to minimize exposure of oil to the natural resources present at the site. Other concerns are the impacts resulting from response activities. Avoid low flying aircraft/helicopters (<1000 ft) over the seabird colonies and marine mammal haulout areas. Avoid noisy boat traffic near the site.

HAZARDS and RESTRICTIONS:

Numerous washrocks surround Bird Rock.

SITE STRATEGIES

Strategy 2-194.1 **Objective: Prevent oil from stranding on rocky shoreline and contaminating seabird and marine mammal use areas.**

ACP DATE 1/1/2000

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy and rocky conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-194.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART	0	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Accessible only by boat, the site is located approximately 300 yds offshore, west of Tomales Point A single rock island pinnacle approximately 300 yds offshore and west of Tomales Point.

LAND ACCESS: None

WATER LOGISTICS:
Limitations: depth, obstruction: Shallow washrocks, heavy surf and swell

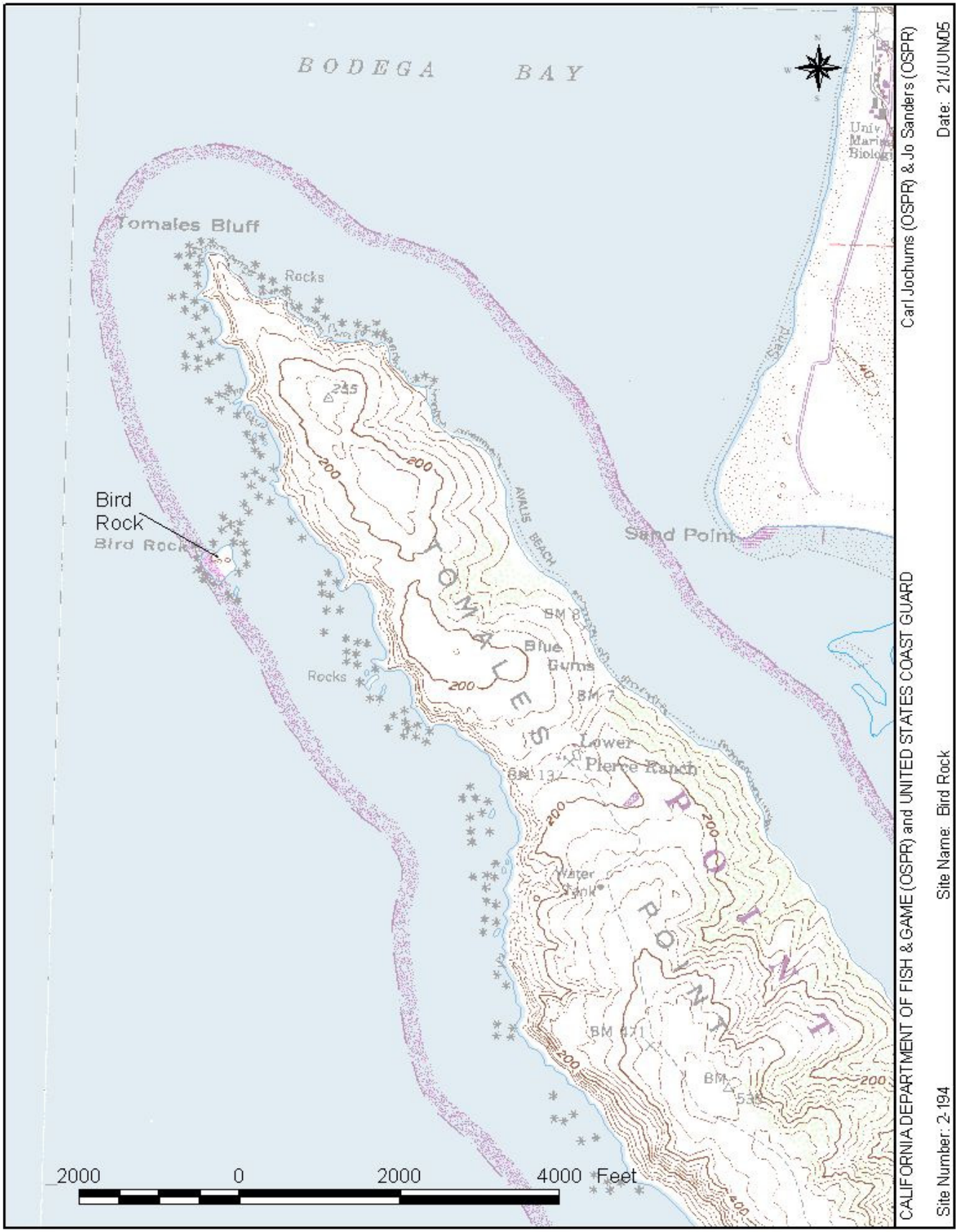
Launching, Loading, Docking and Services Available: Nearest boat ramp is at Lawson's Landing inside Tomales Bay, others are in Bodega Bay.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Lawson's Landing in Tomales Bay.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-197 -A Site Summary- Abbott's Lagoon 2-197 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin**	Marin County	3 8 07	122 57
USGS Quad:	**7.5" Quad: Drakes Bay, CA**	NOAA Chart:	**18640 / Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located within Pt. Reyes National Seashore. The lagoon is in the northern 1/3 of, and fronted by, Point Reyes Beach. The lagoon is open seasonally, primarily during the winter months of very wet years and following periodic high tide over-wash activity. It is surrounded by sandy beaches and vegetated sand dunes.

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority all year. The shoreline of Abbott's Lagoon is used as a nesting and forage area by the western snowy plover. Surrounding dunes are habitat for endangered plants and insects.

RESOURCES OF PRIMARY CONCERN

The lagoon, sandy beaches and vegetated sand dunes are at risk.

The lagoon and surrounding area is used by many birds such as the threatened western snowy plover, shorebirds, raptors, migratory and overwintering geese, dabbling and diving ducks.

The beaches and dunes are inhabited by Myrtle's silverspot butterfly. Large mammals such as fox, coyote, raccoon, and deer are common at the site.

The dunes are habitat for a couple of species of sensitive plants (Layia carnosa and Lupinas tidstromii).

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Sara Koenig	US National Park Service, Pt. Reyes (NS)	(415) 663-8525
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221
	Bill Shook	US National Park Service, Pt. Reyes (NS)	(415) 663-8525

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin	18640 / Bodega and Tomales Bays 18643	3 8 07	122 57

Last Page Update : 1/15/2007

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize the exposure of oil to plants, animals and habitats present at this site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sand dunes, sensitive plants and animals, and soft mudflats, causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Heavy surf along Point Reyes beach. Muddy roads in winter may be impassible.

SITE STRATEGIES

Strategy 2-197.1 Objective: no action when natural sand berm is in place

ACP DATE 1/15/2007

If the sand berm is blocking the entrance of the lagoon, no action is needed unless there is evidence or likelihood that surf may over-top the berm and wash oil into the lagoon. If this is the case, employ strategy 2.

Strategy 2-197.2 Objective: Exclude by booming when tidal exchange with lagoon

ACP DATE 1/15/2007

Deploy boom on inside of lagoon to contain and prevent spread within lagoon. Divert oil to becalmed shore location for collection & recovery. Advise UC/IC of advisablity of constructing sediment dike as necessary and feasible (see Strategy 3)

Strategy 2-197.3 Objective: Exclude with sediment dike (medium grained sand). Prevent oil from entering lagoon.

ACP DATE 1/15/2007

If surf is over-topping into the lagoon, use bulldozers and front-end loaders to build up the barrier berm by skimming sand from the neighboring flat beach (do not use the dunes for sand supply). Use plastic and sand bags as neccessary to create a temporary non-erodable barrier. Place six inch containment boom backed by sorbent boom inside the lagoon to catch any oil which may be washed past the sand dike and barrier.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-197.1	0	0	0	0	0	0	0		0	0	On-water Recovery / ART		
2-197.2	0	500		600	4	25lb. Danforth	0	1	0			8	
2-197.3	0	500		600	10	15lb danforth	0	1	0		dozer & front end loader	7	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From San Francisco take Hwy 101 North to Sir Francis Drake Blvd. West to Olema. Turn north (right) on Hwy 1, go 2 miles and take a left on Sir Francis Drake Blvd through Inverness. Turn right on Pierce Point Road and proceed to the Abbott's Lagoon parking area. This parking is still about 1 mile from the site, however, park rangers can open gates to allow some vehicle access down to lagoon. Located within Pt. Reyes National Seashore. The lagoon is in the northern 1/3 of, and fronted by, Point Reyes Beach.

LAND ACCESS: 2WD, 4WD - not likely in winter

WATER LOGISTICS:
Limitations: depth, obstruction: The lagoon is open seasonally. Skiffs only in lagoon.

Launching, Loading, Docking and Services Available: Hand launch from shore.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

None close by. Set up staging on site or at North Beach Parking lot (3 miles away).

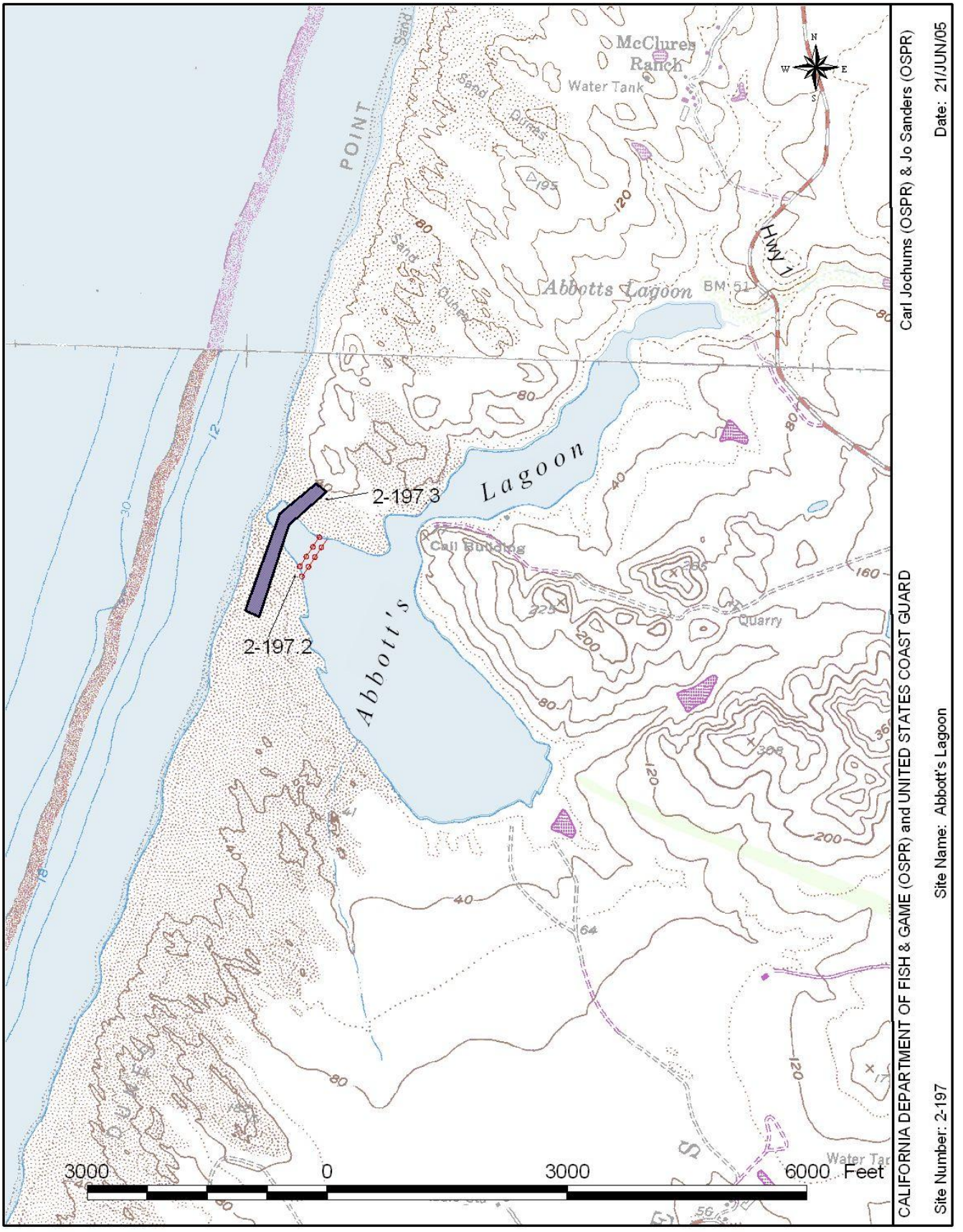
COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Further coordination and planning with the National Park Service will be required to establish access. Services (sanitation, power, and water) are unavailable in this area. Strategy has not been deployed or tested.

Strategy Diagram- Abbott's Lagoon

2-197 -A



Harbor Boom
Swamp Boom
sss / sfs

Sorbent Boom
Other Boom
tsa / sps

Dike or Berm
Excellcior Fence
tba/voo

2-198 -A Site Summary- Point Reyes Beach

2-198 -A

		Thomas Guide Location	Latitude N	Longitude W
County:	**Marin County**	Marin County	3 8 07	122 57
USGS Quad:	**7.5" Quad: Drakes Bay, CA**	NOAA Chart:	**18640 / Bodega and Tomales Bays 18643**	

Last Page Update : 1/1/1996

SITE DESCRIPTION:

Located within Pt. Reyes National Seashore on the northwest side, this beach is about 12 miles long. Beach extends from Point Reyes Headland to Kehoe Beach. Abbott's Lagoon outlets at the northern third of the beach. A northwesterly facing beach with medium coarse sand, moderate slope, and very aggressive surf. The back beach rises as vegetated dunes or steep bluffs. The upper beach is littered with driftwood and debris. AKA "The Great Beach."

SEASONAL and SPECIAL RESOURCE CONCERN

"A" priority all year. Most sensitive during November through June during bird nesting and seal haulout and pupping periods. Western snowy plovers may nest anywhere along the upper beach. The most southerly mile of beach is used by northern elephant Seals as a pupping and haulout area.

RESOURCES OF PRIMARY CONCERN

Extensive beaches and broad vegetated sand dunes are habitats found at this site. Most sensitive November-June.

The threatened western snowy plover may use the entire beach area throughout the year, and nest during spring and summer months in upper beach regions. Shorebirds are present throughout the year but most abundant during the fall and winter months (Oct-Apr). Several raptors, such as peregrine falcons, red-tail hawks, osprey, and white-tailed kite forage over the beach and dune habitats. Turkey vultures and ravens are abundant and scavenge sick and dead wildlife from throughout the site.

Northern Elephant seals haulout and pup at the south end of the beach near the headland (South Beach parking lot to the headland) from November through July. Large mammals such as fox, coyote, raccoon, and deer are common at the site.

A variety of dune plants, including threatened and endangered species, occur in the sand dunes.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

This is a culturally sensitive area. For specific sites, contact the Pt. Reyes Park headquarters archeological staff, the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
	Sarah Allen	US National Park Service, Pt. Reyes (NS)	(415) 464-5187
	Main Offic GFNMS	National Marine Sanctuaries, Gulf of the Farallones	(415) 561-6622
	Sara Koenig	US National Park Service, Pt. Reyes (NS)	(415) 663-8525
	Thomas O. Moore	CA Dept. of Fish & Game	(707) 875-4261
	PRBO Main Office	Pt. Reyes Bird Observatory	(415) 868-1221
	Pt. Reyes NP Dispatch PRNS	US National Park Service, Pt. Reyes (NS), Ranger	(415) 464-5170
	Bill Shook	US National Park Service, Pt. Reyes (NS)	(415) 663-8525

ADDITIONAL SITE SUMMARY COMMENTS:

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Marin County Marin County	18640 / Bodega and Tomales Bays 18643	3 8 07	122 57

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

The concerns are oil contamination and response activity impacts to wetlands, rare and endangered species, and other vulnerable plants and wildlife which are present throughout the year. The primary objective is to minimize exposure of oil to the site and natural resources present at the site. Other concerns are the impacts resulting from response activities. Avoid trampling wetlands, sand dunes, sensitive plants and animals causing penetration of oil into the sediments and further injury to the environment.

HAZARDS and RESTRICTIONS:

Narrow roads, Large surf and swell

SITE STRATEGIES

Strategy 2-198.1 **Objective: Prevent oiling of snowy plover and elephant seal use areas. Prevent injury to sand dunes from cleanup activities.** ACP DATE 1/1/2000

This site is difficult to protect as is most of the outer coast. Mechanical shoreline protection techniques are not likely to be effective because of high wave energy conditions at this site.

a) Recommended response strategy is on-water containment and recovery.
b) Pursue feasibility of alternative response technologies (e.g. dispersants and in-situ burning) to reduce the volume of oil reaching the site.
c) If suitable conditions exist, deflect oil away from the south end of the beach which is used by seals.
d) The beach may be suitable as an oil collection site, but there is no indication that the oil will hold on the beach once it strands. The southerly quarter is not desirable for collection due to the proximity of seals. For details, contact Pt. Reyes National Park resource specialists.
e) Conduct beach pre-cleaning during plover nesting season only with advice and consent of DFG and USFWS. Also contact Pt. Reyes National Park resource specialists.
f) Use manual recovery methods in most situations. For very heavy oiling conditions, consider front-end loaders.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No and kinds	staff deploy	Staff tend
2-198.1	0	0	0	0	0	0	0	0	0		On-water Recovery / ART		

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

From San Francisco take Hwy 101 North to Sir Francis Drake Blvd., west to Olema. Turn north (right) on Hwy 1, go 2 miles and take a left on Sir Francis Drake Blvd through Inverness. Several access points to the beach are possible. Take Pierce Point Road to access McClure's Beach, Kehoe Beach, or Abbott's Lagoon. Continue on Sir Francis Drake to access the North and South Beach parking areas. Located within Pt. Reyes National Seashore on the northwest side, this beach is about 12 miles long. Beach extends from Point Reyes Headland to Kehoe Beach. Abbott's Lagoon outlets at the northern third of the beach.

LAND ACCESS: Large truck okay

WATER LOGISTICS: large surf and swell common; steep beach
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Nearest boat ramp at Lawson's Landing in Tomales Bay, other ramps in Bodega Bay.

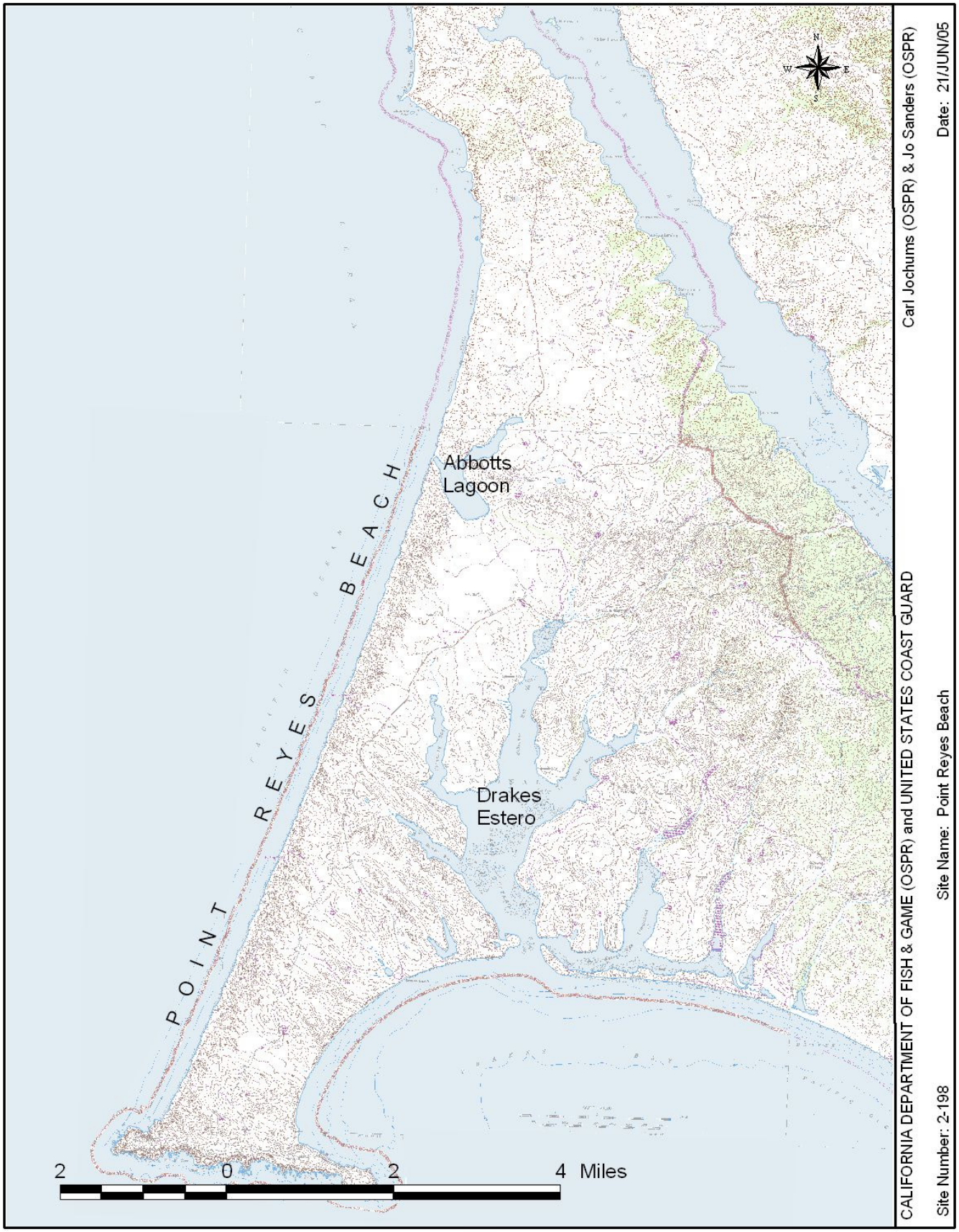
FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

No facilities. Staging at parking areas.

COMMUNICATIONS PROBLEMS:

ADDITIONAL OPERATIONAL COMMENTS:

Coordination with the National Park to establish access routes. Services (sanitation and water) are infrequent in this beach area. Strategy has not been deployed or tested.


POINT REYES BEACH
Abbotts Lagoon
Drakes Estero
2 0 2 4 Miles
CALIFORNIA DEPARTMENT OF FISH & GAME (OSPR) and UNITED STATES COAST GUARD
Carl Jochums (OSPR) & Jo Sanders (OSPR)
Date: 21/JUN/05
Site Name: Point Reyes Beach
Site Number: 2-198
Harbor Boom
Swamp Boom
sss / sfs
Sorbent Boom
Other Boom
tsa / sps
Dike or Berm
Excellcior Fence
tba/voo

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9841.2 Cultural and Other Resources at Risk

9841.21 Cultural Resources, Historic and Archeological Resources – see Section 9802.1,
Section 9840 for contact table, and
individual Site Summaries

9841.22 Essential Fish Habitat – see Section 9802.2

9841.23 Other Resources at Risk - This section is reserved for specialized information regarding natural resources that occur in this particular geographic area; such as: seasonal migratory waterfowl and shorebird locations and densities; salmonid fish migration periods; or special considerations for eelgrass beds.

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9841.3 Economic Sites

Strictly economic resources are designated as the third priority for dedication of oil spill response resources, following human health and safety and environmental resources. The economic sites are ranked using a continuation of the environmental scale with D, E, and F categories. Economic resources that have a greater potential for long-term damages receive a higher rank or priority for emergency response.

The following criteria or definitions are used to categorize economic resources in terms of priority for response:

D = Economic activities and resources which require high water quality for their operations or existence. Resources that fall into this category would face severe, long-term economic impacts from a spill.

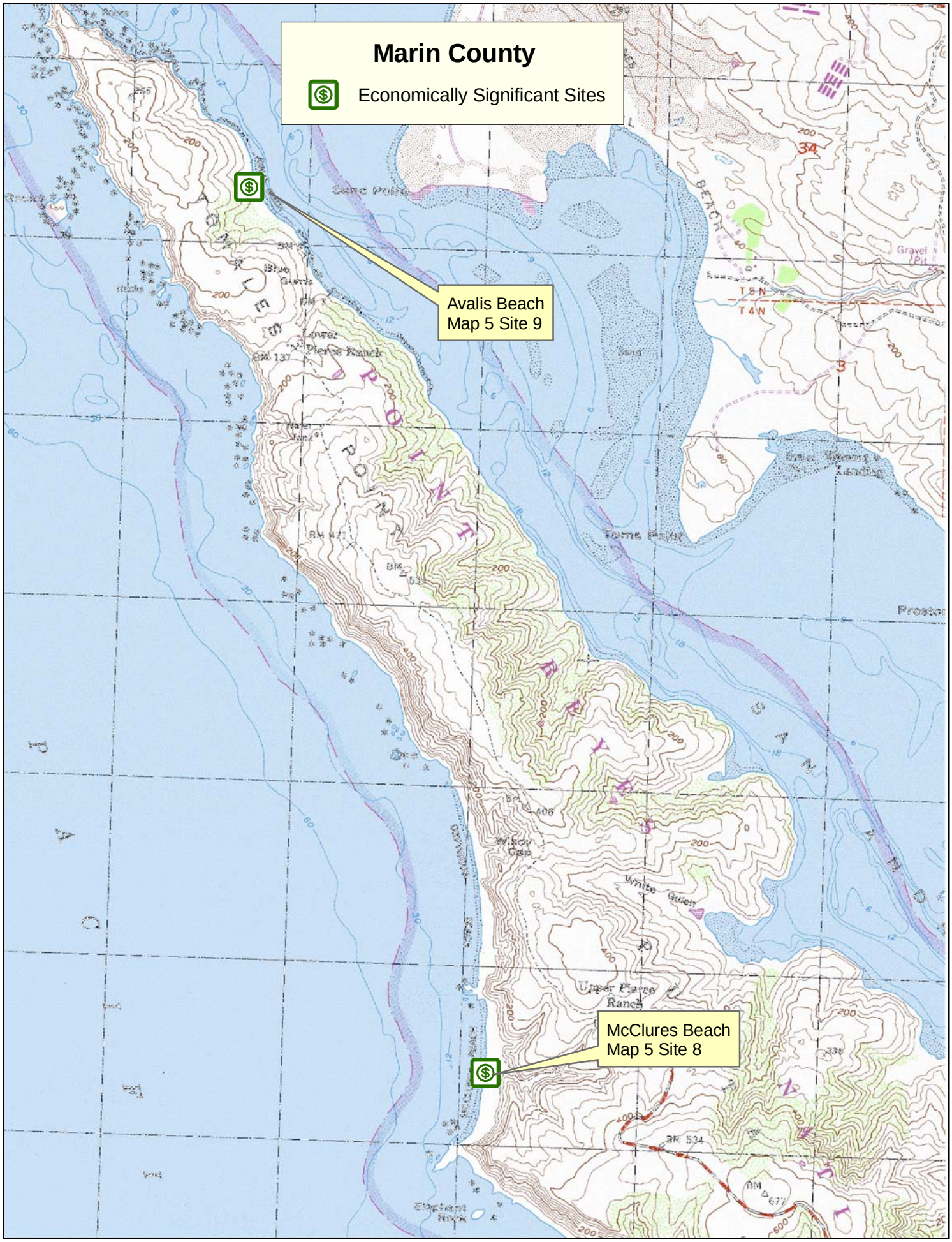
E = Facilities, businesses, or resources which directly use coastal or bay waters within their economic activity and which are at risk of oiling from a spill in marine waters. The resources falling into this category would face significant disruption of their activity, but shorter term potential damages from oiling that resources "D" category.

F = This category contains marine associated facilities, businesses and resources. These resources would face economic impacts from a marine spill, but do not depend directly on marine water for their economic base. Resources in this category will tend to face less severe damages than those identified in categories D or E.

In the following section, economic sites found within the GRA are listed in table format, which contain information such as latitude, longitude, economic sensitivity, etc. Following the table are diagrams denoting the location of an economically sensitive site(s). Diagrams are organized alphabetically by county, then numerically by map and site number.

Economic Sites in GRA 1									
Line No.	Map Description	Site Name	Site Description	Latitude	Longitude	Economic Sensitivity	Site Function	Site Address	GIS Site No.
1	Map 1 Site 11 Marin County								
2	Map 5 Site 8 Marin County	McClures Beach		38.19	-122.96	E	Federal Recreation Area		41066
3	Map 5 Site 9 Marin County	Avalis Beach		38.23	-122.98	E	Federal Recreation Area		41067
4	Map 5 Site 10 Marin County	Tomales Beach		38.17	-122.92	E	Federal Recreation area		41068
5	Map 5 Site 12 Marin County	Tomales Bay Aquaculture and Mariculture	Throughout the Length of Tomales Bay	38.17	-122.90	E	Private Mariculture Leases		41070
6	Map 5 Site 13 Marin County	Miller County Park		38.20	-122.92	E	Boat Ramp, Picnic Facilities		41071
7	Map 5 Site 14 Marin County	Bodega Fish/Ocean Farms Inc	Estero w/Water Intake (appears to be in Sonoma County)	38.30	-123.00	E	Private Mariculture Facility		41072
8	Map 5 Site 16 Marin County	Dillon Beach		38.25	-122.97	E	Recreational Area		41074
9	Map 1 Site 1 Sonoma County	Gualala Point Regional Park		38.76	-123.53	E	County Park		97001
10	Map 1 Site 2 Sonoma County	Sea Ranch		38.72	-123.45	E/F	6 Public Coastal Access Ways, Residential Area County Managed Recreation Access Ways		97002
11	Map 1 Site 3 Sonoma County	Stewarts Point		38.65	-123.41	E	Private ownerships		97003
12	Map 1 Site 4 Sonoma County	Kruse Ranch State Park		38.59	-123.33	E	State Park		97004
13	Map 1 Site 5 Sonoma County	Salt Point State Park		38.58	-123.31	E	State Park		97005
14	Map 1 Site 6 Sonoma County	Ocean Cove		38.56	-123.30	E/F	Private Recreation Facilities, Boat Launch, Camping, Accommodations, Private Residences		97006
15	Map 1 Site 7 Sonoma County	Stillwater Cove County Park		38.55	-123.29	E	County Park		97007
16	Map 1 Site 8 Sonoma County	Timber Cove		38.53	-123.27	E/F	Residential Accommodations		97008
17	Map 1 Site 9 Sonoma County	Fort Ross		38.51	-123.24	E	Camping, Accommodations		97009
18	Map 1 Site 10 Sonoma County	Fort Ross Historic Park		38.51	-123.25	E	State Park		97010
19	Map 1 Site 11 Sonoma County	The Reef Campground		38.50	-123.23	E	State Park, Camping		97011
20	Map 2 Site 1 Sonoma County	Jenner, Russian Gulch, Russian River, Goat Rock		38.45	-123.12	E	Private and Public Recreational Facilities, Boat Launch, Accommodations and Private Residences		97012
21	Map 2 Site 2 Sonoma County	Blind Beach		38.44	-123.12	E	Coastal Access, Recreation		97013
22	Map 2 Site 3 Sonoma County	Shell Beach		38.42	-123.10	E	Coastal Access, Recreation		97014
23	Map 2 Site 4 Sonoma County	Wrights Beach		38.40	-123.10	E	Coastal Access, Recreation, Camping		97015
24	Map 2 Site 5 Sonoma County	Duncans Landing		38.40	-123.09	E	Coastal Access, Recreation		97016
25	Map 2 Site 6 Sonoma County	Duncans Cove		38.39	-123.09	E	Coastal Access, Recreation		97017
26	Map 2 Site 7 Sonoma County	Gleason Beach		38.39	-123.08	E	Coastal Access, Recreation		97018
27	Map 2 Site 8 Sonoma County	Portugese Beach		38.38	-123.08	E	Coastal Access, Recreation		97019
28	Map 2 Site 9 Sonoma County	Schoolhouse Beach		38.38	-123.08	E	Coastal Access, Recreation		97020
29	Map 2 Site 10 Sonoma County	Carmet Beach		38.37	-123.08	E	Coastal Access, Recreation		97021
30	Map 2 Site 11 Sonoma County	Marchall Gulch		38.37	-123.07	E	Coastal Access, Recreation		97022
31	Map 2 Site 12 Sonoma County	Arched Rock Beach		38.37	-123.07	E	Coastal Access, Recreation		97023
32	Map 2 Site 13 Sonoma County	Coleman's Beach		38.37	-123.07	E	Coastal Access, Recreation		97024
33	Map 2 Site 14 Sonoma County	Miwok Beach		38.36	-123.07	E	Coastal Access, Recreation		97025
34	Map 2 Site 16 Sonoma County								
35	Map 3 Site 1 Sonoma County	Bodega Head	West from Westside Road	38.32	-123.07	D/E	UC Marine Lab, Horseshoe Cove		97027
36	Map 3 Site 2 Sonoma County	Bodega Harbor		38.32	-123.05	D/E	Harbor		97028
37	Map 3 Site 3 Sonoma County	Westside Regional Park	Owned/Operated by Sonoma County Regional Parks	38.32	-123.05	E	Day Use, Camping, Boat Ramp		97029

Economic Sites in GRA 1									
Line No.	Map Description	Site Name	Site Description	Latitude	Longitude	Economic Sensitivity	Site Function	Site Address	GIS Site No.
38	Map 3 Site 4 Sonoma County	Spud Point Marina	Owned by Sonoma County	38.33	-123.05	E	Commercial and Recreational Berths, Ice, Fuel		97030
39	Map 3 Site 5 Sonoma County	Masons Marina	Privately Owned	38.34	-123.06	E	Commercial and Recreational Berths, Fuel		97031
40	Map 3 Site 6 Sonoma County	Harbor Fisheries	Privately Owned	38.33	-123.06	E	Fish Company		97032
41	Map 3 Site 7 Sonoma County	Porto Bodega	Privately Owned	38.33	-123.05	E	Commercial, Recreational Berths, Fuel		97033
42	Map 3 Site 9 Sonoma County	Numerous Small Businesses		38.33	-123.04	E			97034
43	Map 3 Site 10 Sonoma County	The Tides	East of Hwy 1	38.32	-123.03	E	Commercial Fish Company, Restaurant, Accommodations East of Hwy 1		97035
44	Map 3 Site 11 Sonoma County	Lucas Wharf		38.32	-123.04	E	Commercial Fish Company, Restaurant		97036
45	Map 3 Site 12 Sonoma County	Doran Park	Doran Park Road, West of Hwy 1	38.31	-123.04	E	County Park, Boat Launch, Camping		97037
46	Map 3 Site 13 Sonoma County	Coast Guard Station		38.31	-123.05	E	SAR Facility		97038
47	Map 3 Site 14 Sonoma County	Bodega Fish Farms	Estero Lane, Off Hwy 1	38.30	-123.00		Ocean Farms, Inc.		97039



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IACP12 - SF Bay & Delta - GRA 1

9841.

California Department of Fish and Game
Office of Spill Prevention and Response
Marin County Layout 021

October 1, 2005

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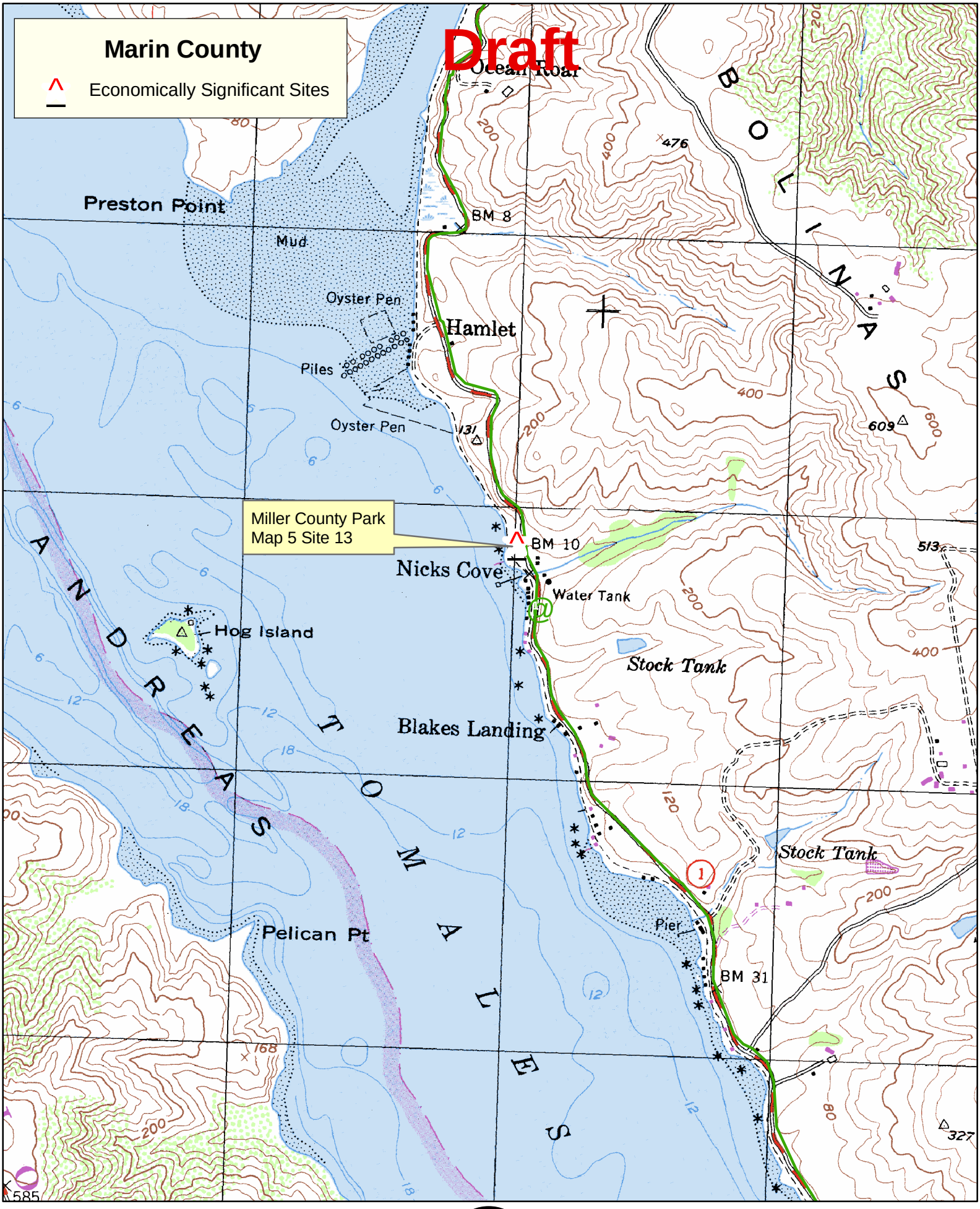
ACP 2 - SF Bay & Delta - GRA 1

9841

California Department of Fish and Game
Office of Spill Prevention and Response
Marin County Layout 020

October 2005



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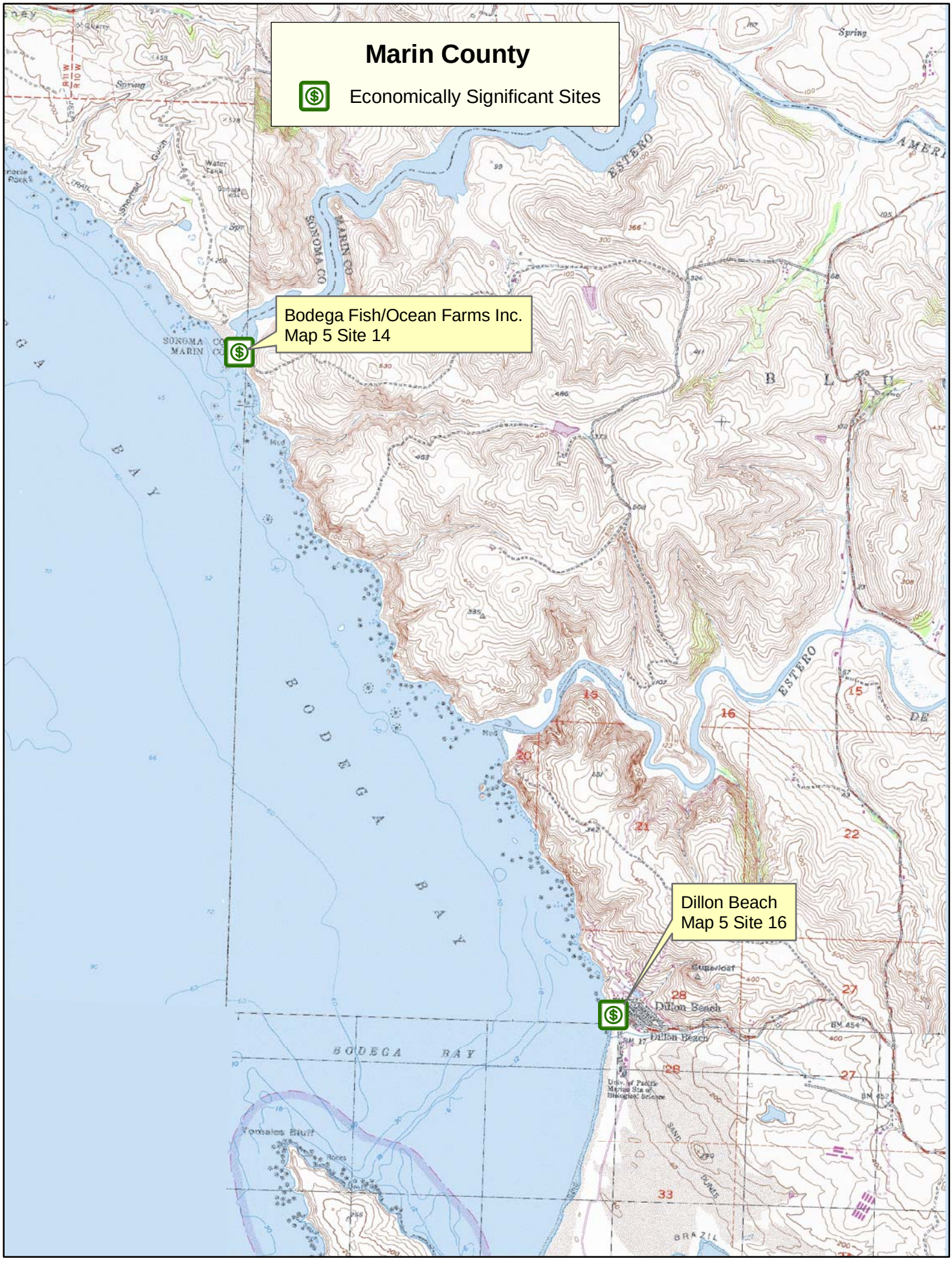
California Department of Fish and Game
Office of Spill Prevention and Response
Marin County Layout 022

October 1, 2005



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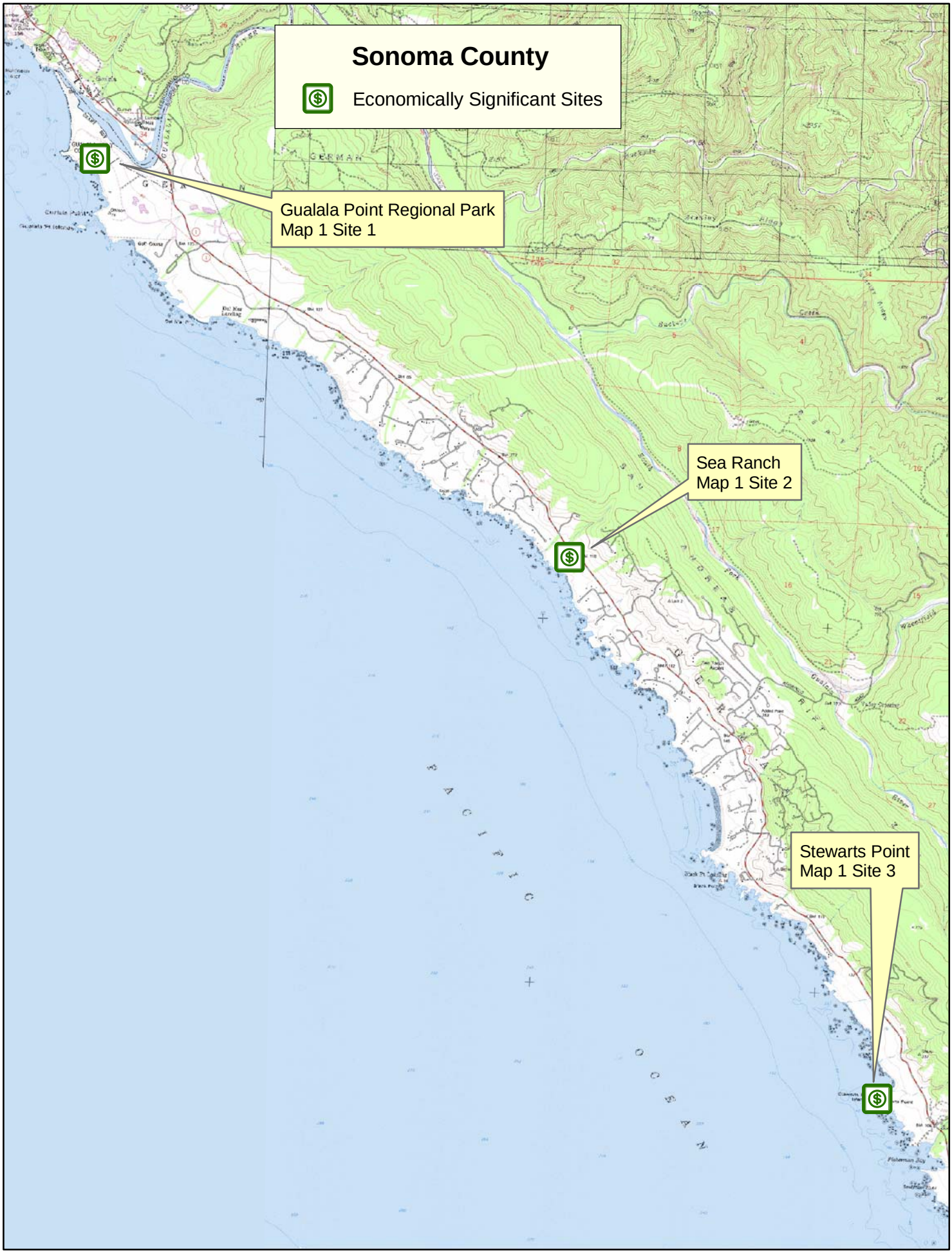
California Department of Fish and Game
Office of Spill Prevention and Response
Marin County Layout 023

October 1, 2005



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ACP 2 - SF Bay & Delta - GRA 1

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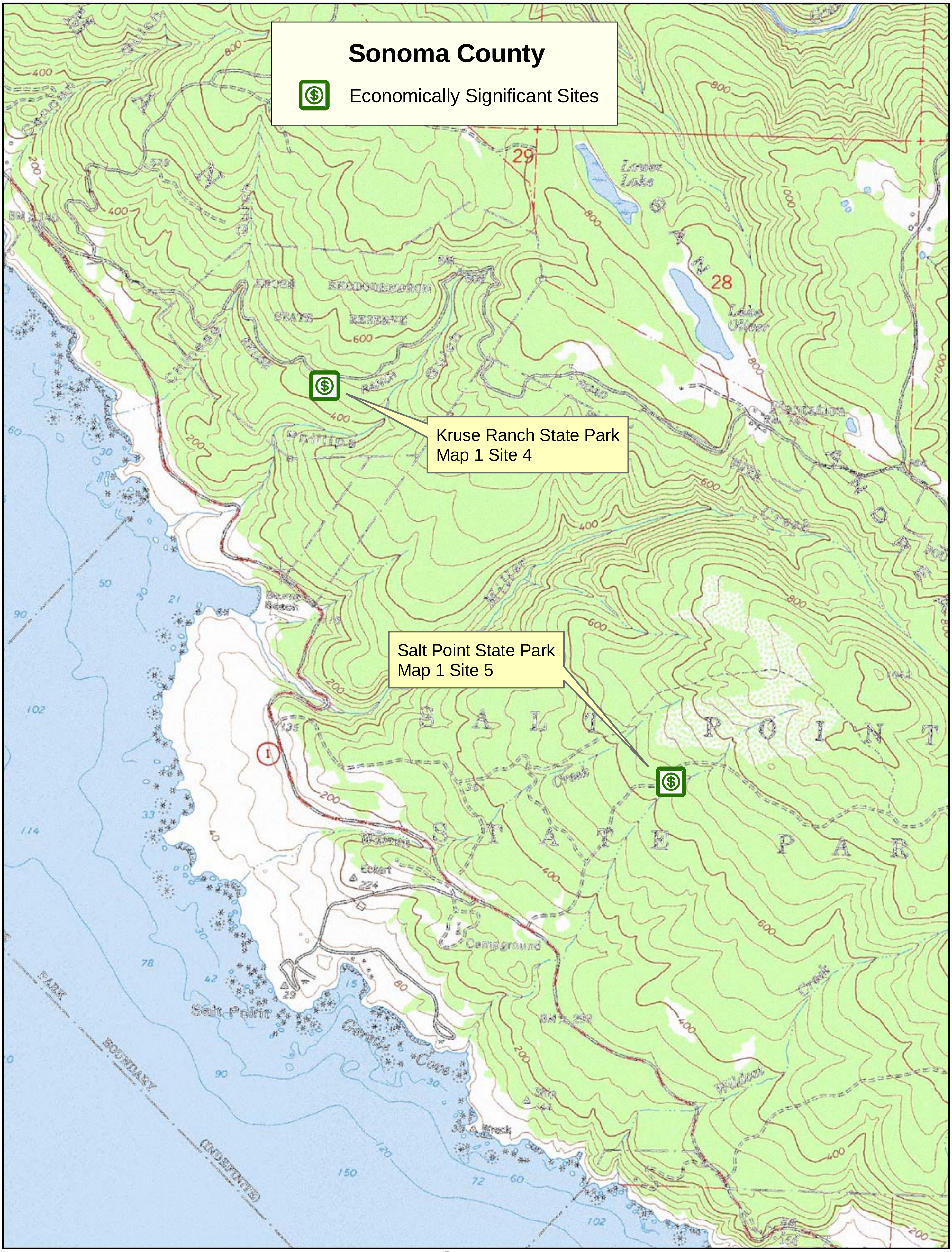
California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 001

October 1, 2005



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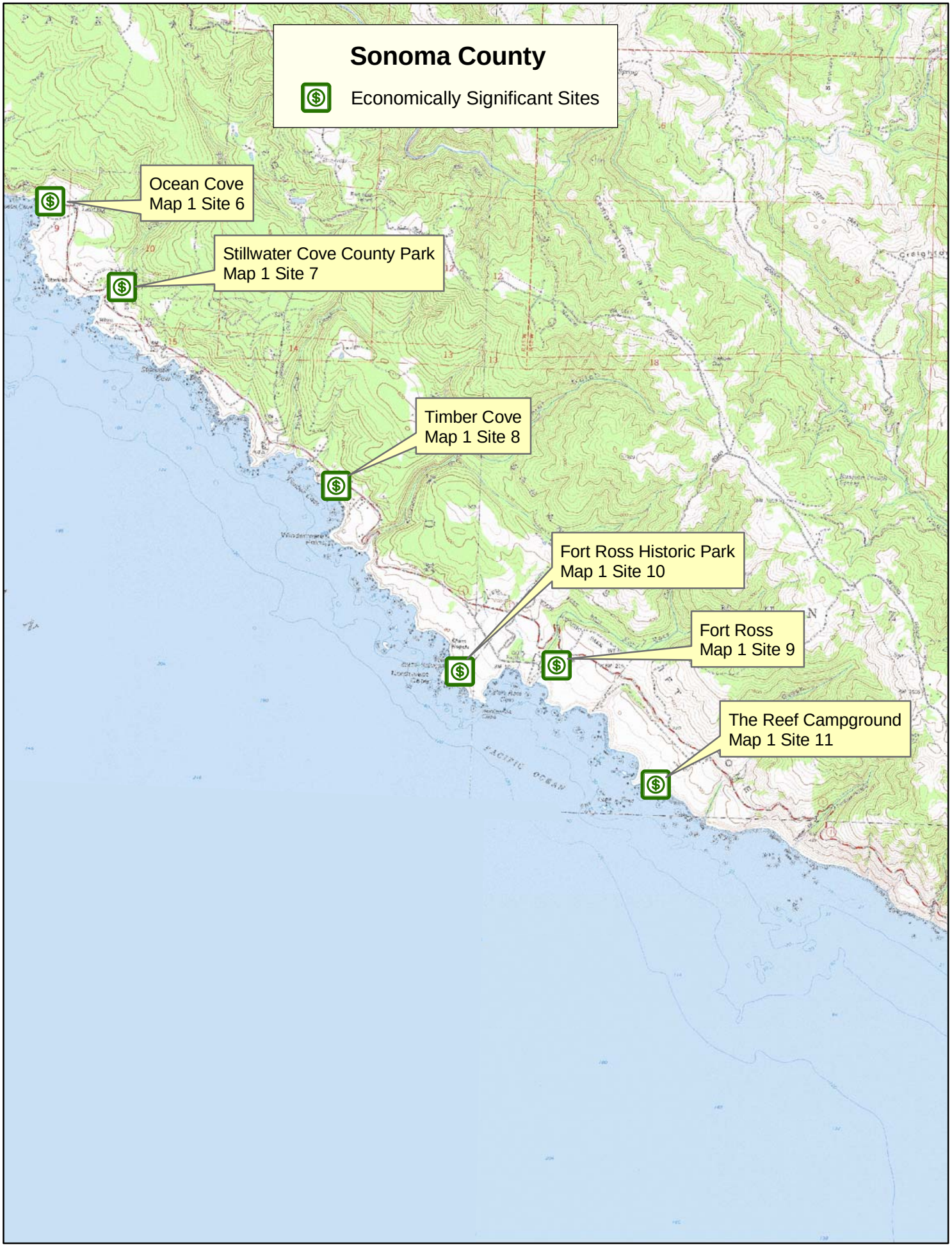
Sonoma County
Economically Significant Sites
Ocean Cove
Map 1 Site 6
Stillwater Cove County Park
Map 1 Site 7
Timber Cove
Map 1 Site 8
Fort Ross Historic Park
Map 1 Site 10
Fort Ross
Map 1 Site 9
The Reef Campground
Map 1 Site 11
PACIFIC OCEAN
0 0.25 0.5 1 1.5 2 Miles
ACP 2 - SF Bay & Delta - GRA 1
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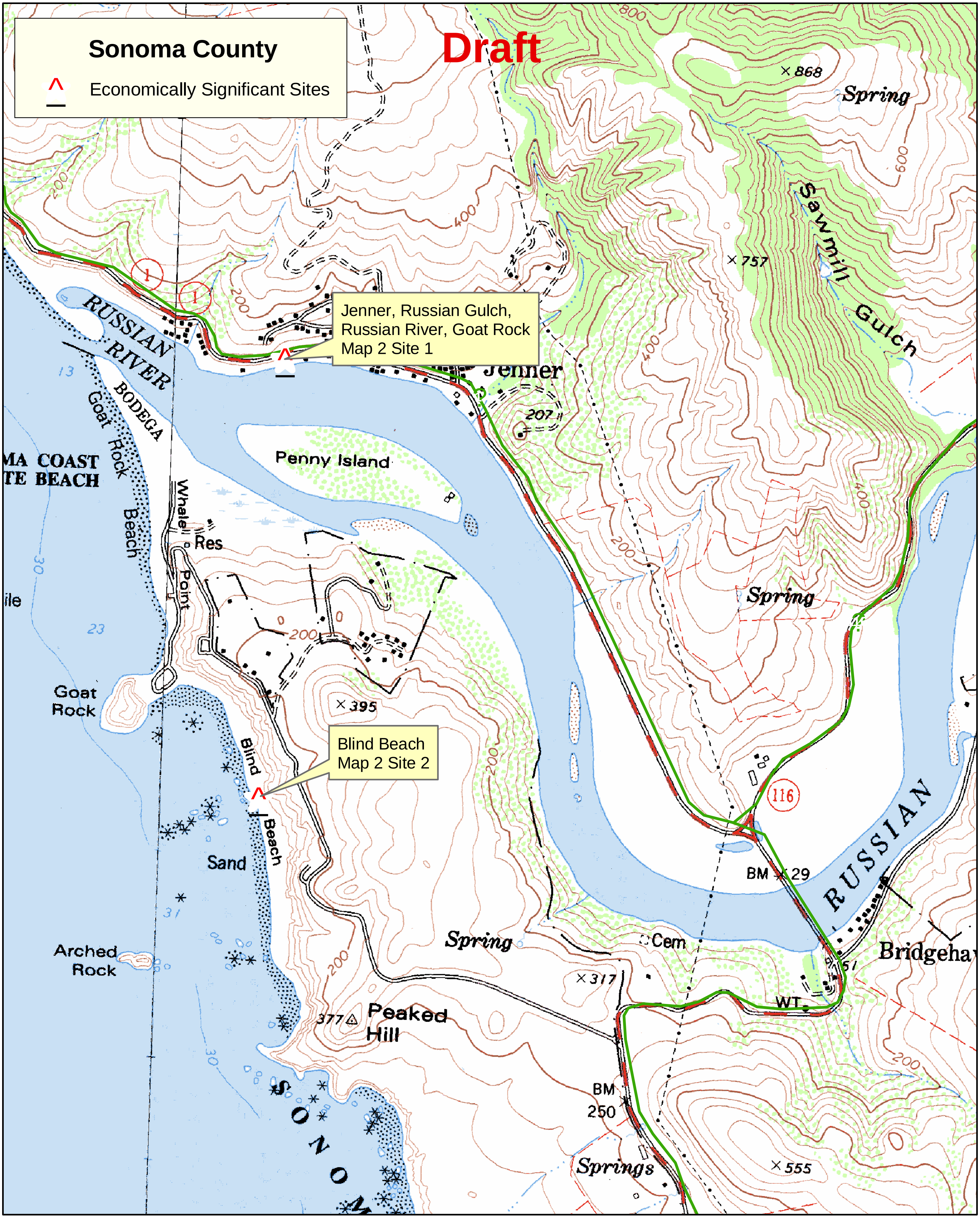
California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 2006
October 1, 2006



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ACP 2 - SF Bay & Delta - GRA 1

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Office of Spill Prevention and Response
October 1, 2005
Sonoma County Layout 009

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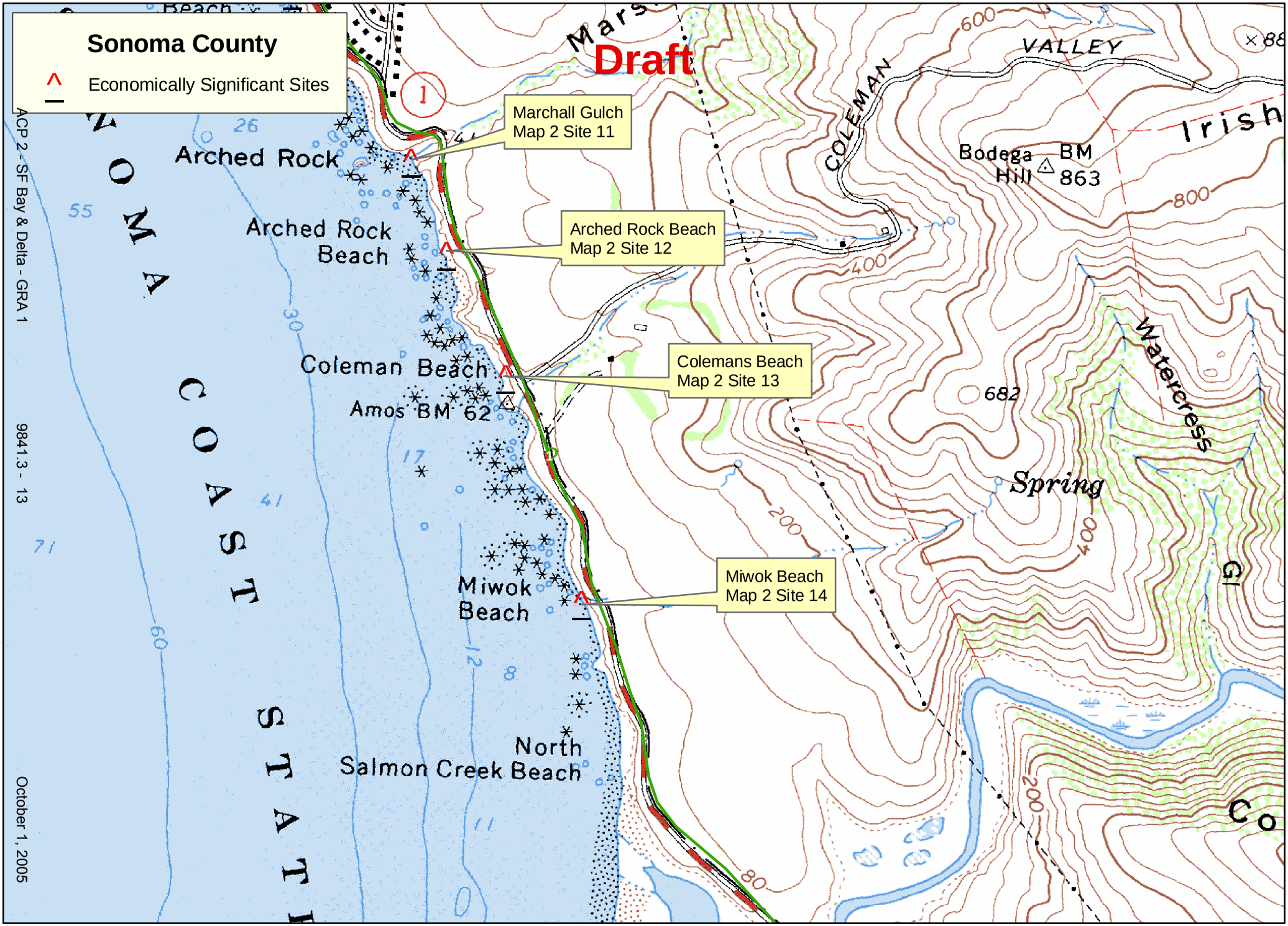
California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 2015

October 1, 2015


Sonoma County
Economically Significant Sites
Draft
Marchall Gulch
Map 2 Site 11
Arched Rock Beach
Map 2 Site 12
Colemans Beach
Map 2 Site 13
Miwok Beach
Map 2 Site 14
Arched Rock
Arched Rock Beach
Coleman Beach
Amos BM 62
Miwok Beach
North Salmon Creek Beach
SONOMA COAST STATE
COLEMAN VALLEY
Bodega Hill BM 863
Irish
Watercress
Spring
682
600
800
400
200
ACP 2 - SF Bay & Delta - GRA 1
9841.3 - 13
October 1, 2005
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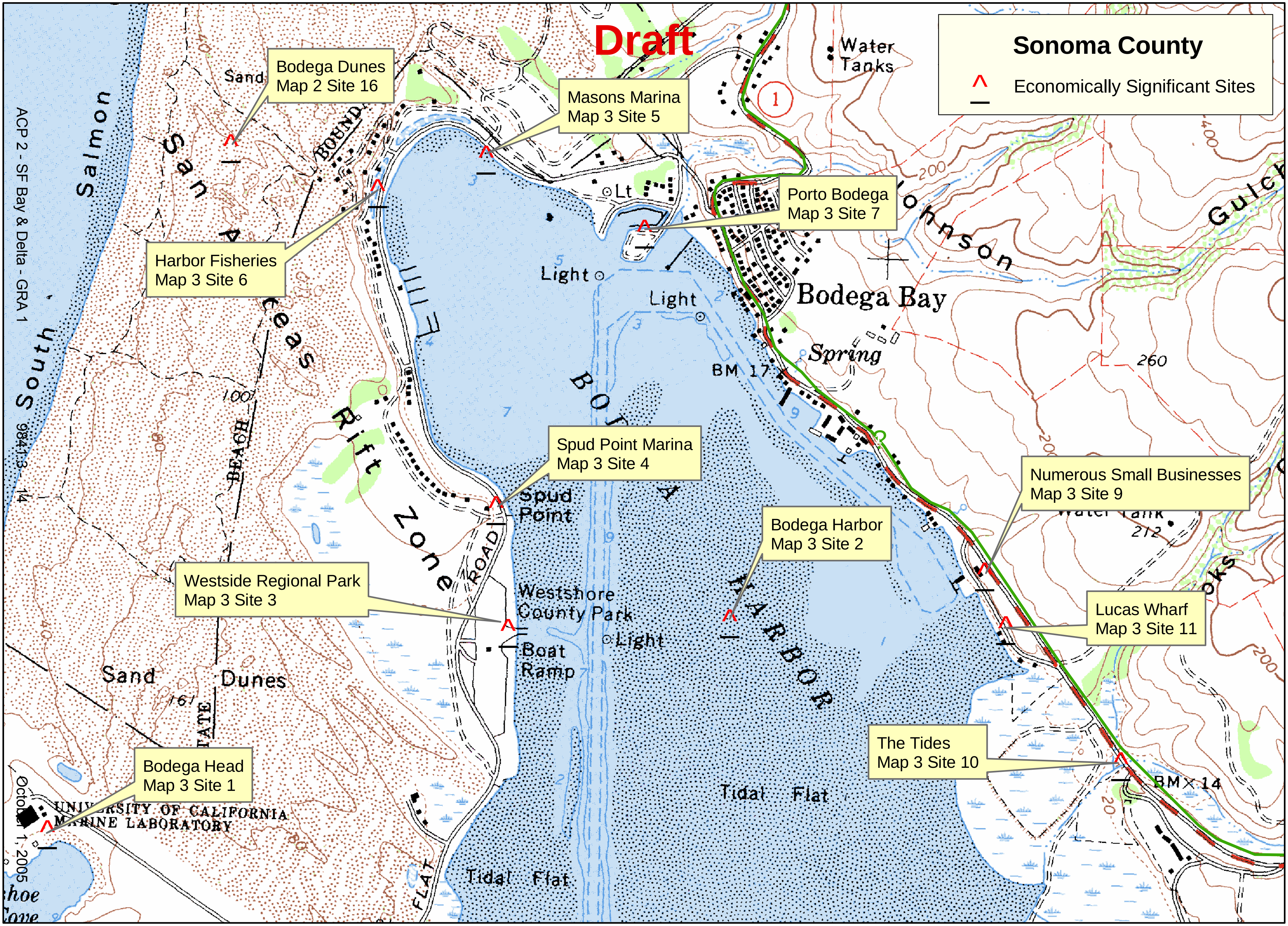
California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 012



ACP 2 - SF Bay & Delta - GRA 1

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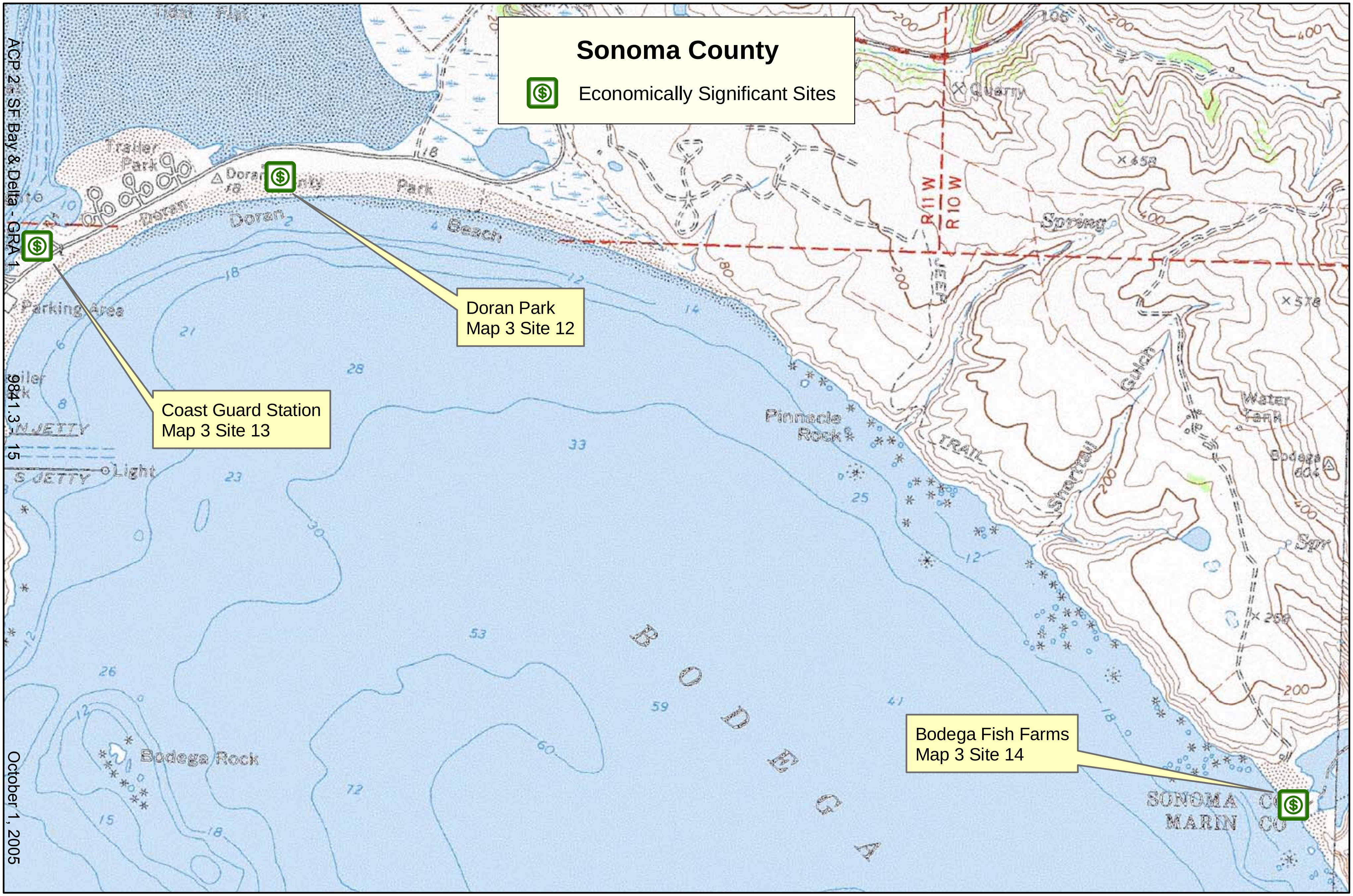
October 1, 2005

California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 014



California Department of Fish and Game
Office of Spill Prevention and Response
Sonoma County Layout 015

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9841.4 Shoreline Operational Divisions

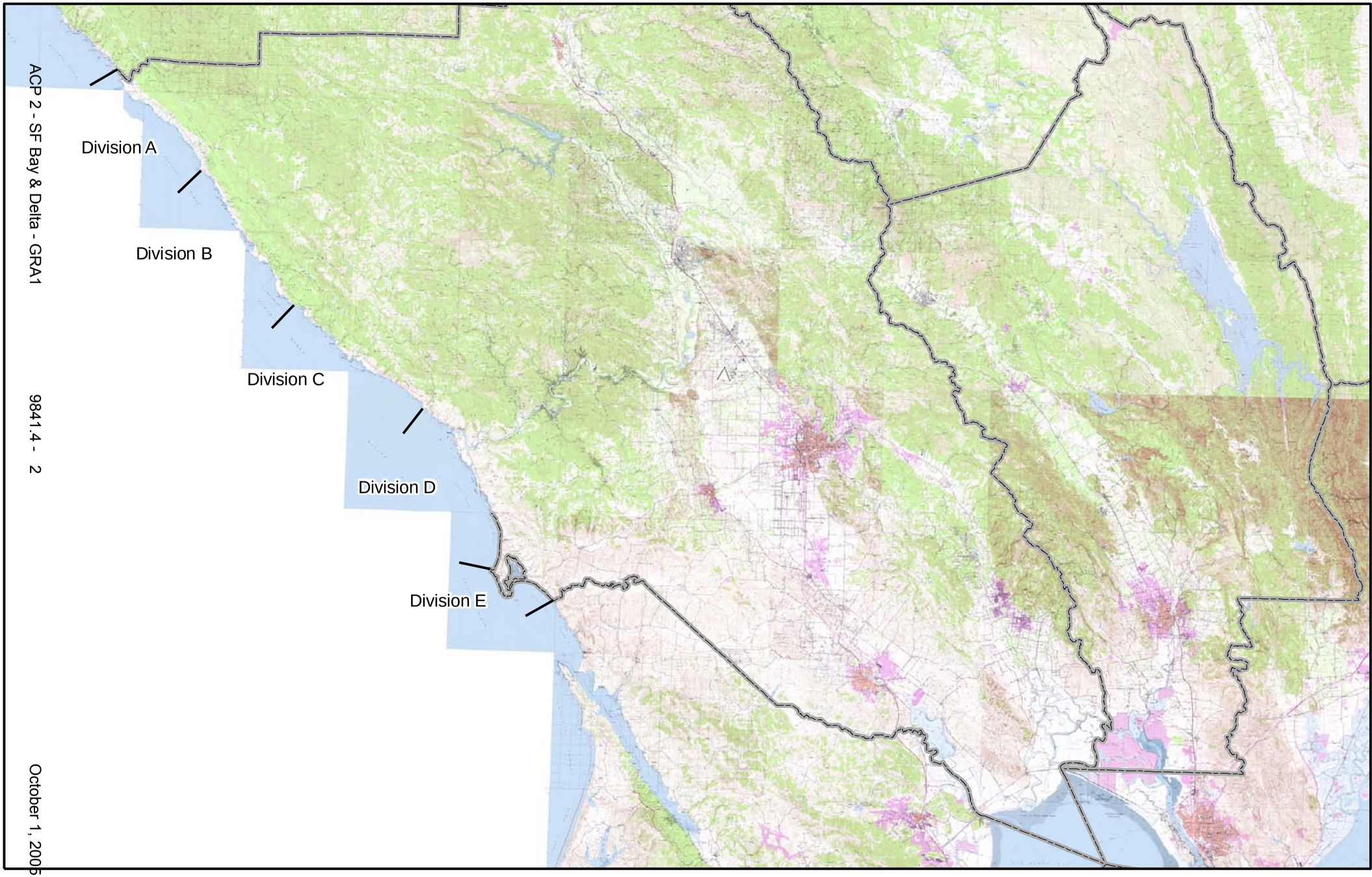
Shoreline Operational Divisions are presented in the ACP as front-loaded information to assist in rapid response planning to provide for quickly organized operational objectives and assignments along affected shorelines. The operational divisions have been developed in conjunction with the US Coast Guard, California Fish and Game OSPR, and various Oil Spill Response Organizations. Experience has demonstrated that in the earliest stages of spill response having organizational issues such as this prepared in advance is very useful to the response team.

The shoreline operational divisions are organized and named according to County boundaries. Within county domains, divisions are boundaries are guided by logical geo-political features such as coastal physical characteristics and land ownership/management issues, shoreline cleanup logistical considerations, and manageable sized coastline segments (generally not longer than about ten miles although some variation occurs.) Logistics, access, and manageability were driving considerations in this effort, particularly as it relates to types of cleanup operations required and problems likely to be present.

In ACP areas having more than one county, Shoreline Operational Divisions will utilize county codes followed by a single alpha character (A to Z). Shoreline operational divisions are labeled from north to south in each county. For example, the north-most operational division in Los Angeles County is “LA-A.” In large bays (i.e. San Diego), the labeling will progress in a clockwise direction to accommodate changing coastline angles. Divisions can be easily subdivided (as necessary) by the Operations Section management to provide for appropriate work assignment effort.

Double digit alpha characters (AA to ZZ) will be used for all offshore operational areas and any other special operational areas needed during response.

Sonoma (SN) County Operational Divisions



ACP 2 - SF Bay & Delta - GRA1

9841.4 - 2

October 1, 2005

Legend

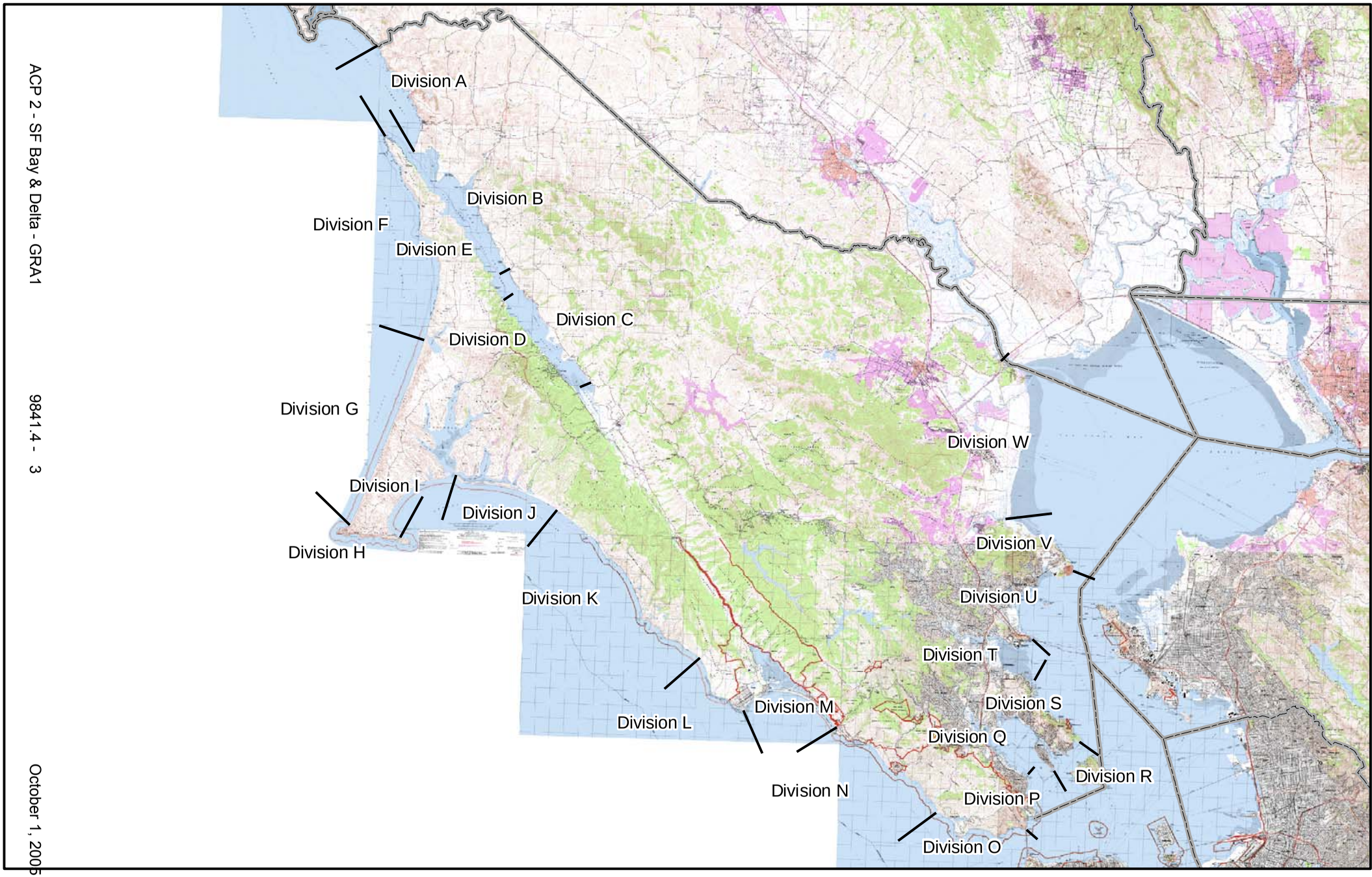
Division Line

Source: J. Tarpley

0 5 10 20

Miles

Marin (MR) County Operational Divisions



ACP 2 - SF Bay & Delta - GRA1

9841.4 - 3

October 1, 2005

Legend

Division Line

Source: J. Tarpley

0 5 10 20

Miles

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